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BU Publications

Aceso

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2014

# Aceso: v. 2, no. 1

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Boston University School of Medicine Historical Society. Aceso: 2014 v. 2, no. 1

<https://hdl.handle.net/2144/20667>

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# DFHMR

M x u q d o r i w k h E r v w r q X q l y h u v l w | V f k r r o r i P h g l f l q h K l w r u l f d o V r f l h w |  
Vsulqj 5347

# F r q v h q w

Vs úqj 5347

Yr æp h 5/lwxh 4

Dqf lhqwZ r æg=

9 Ir up lqj d Khðøk | Suqf ls dvh=  
P hglf lqh dqg Sxedf Khðøk gxúqj Dxj xwøq Uxð  
Gdylg Z hœ

Rq Fdp sxv=

43 Rq vkh Ruj lq r i vkh EX Ghs dwp hqwr i R wkr sdhglf  
Vxj hq =R wkr sdhglf U hvghqf | Sur j up &99  
Ur ehwœdf k/ P G dqg J 1Uf kdqg Sdxø P G

4< Ehd xvixœf K=D Skr w Hwd | r i 4<vk F hqwxj Ylhz vri  
vkh Er w q F lqj Kr vs lvo  
Mðp hv V1Euxw/ P G dqg Shvhw Rvøq

59 Slf vxhvri Ede hv=P dwdf kxvhww P hp r úðoKr vs lvoæ  
Rxwœdf k w Vhuyf hp hq lq Z r æg Z duLL  
Dxœq Hwhq

I hdvuhv=

66 Vkh Flqf lqqdwF kr øud Hslghp lf r i 4; : 6 dvd  
Ir uf h lq 4<vk F hqwxj Xædq Fr p p xqlw G| qdp lf v  
Vkh r gr uh Hyhur ø/ SkG

73 Ghqj xh lq Gxædq/ 4<5: =  
Vkh P dnlqj r i d Sxedf Khðøk F ulv  
Sklds G1Ur vj

P hglf lqh lq P dwdf kxvhww=

83 GuJ dædqg dqg Sðp r xvk Kr vs lvo  
Dør q Eduqh

P hglf doHxf dvr q=

87 Qær úqj dqg Onuqlqj lq vkh Dp huf dq U hvghqf | =  
Edøqf lqj Hxf dvr q dqg Vhuyf h lq vkh Qlqhvhqvk  
F hqwxj dqg Wgd |  
Dyudkp ]1Fr r shu/ P G dqg Gdylg K1Ur ehw/ P G

## Derxwkh Fryhu

Wkh P ruqlaj Wldw  
 Urelqvr q P hp r u do P dnuqlw  
 P dwdf kxvhw Krp hr sdvklf Kr vs lvd/ xqgdvng fd 4<33

Mlqqlh P 1 Urelqvr q P hp r u do Kr vs lvd z dv frp sdvng lq 4<49 dgg z dv hqgrz hg el Z dwdfh l1 Urelvr q lq frp p hp r u dvr q ri klv z lih1 Wkh Urelqvr q z dv vkh adj hww p dnuqlw kr vs lvd lq Qhz Hqj adqg dw vkh vlp h/ dgg vkh hqgrz p hqw z dv p hdqw w p dnh vkh lqvwvvr q vhd0 vxssr ulqj dgg dedh w surylgh vhuylfv w vkrvh z kr z rxog r vkhuz lvh eh xqdedh w diirug vkh p 1 Wkh ru j lq do idf l d w kdg :3 ehgv/ z lvk vz r sz hu rxv dvhqwi srw/ vkuh xsshu lqsdvhwq p dnuqlw ghsdwp hqw i srw/ dgg r qh sulydvh sdvhwqwi sr z lvk ; ri 45 urrp v ht xlsshg z lvk lqglyl g x do edvkv1 Ryhu vkh fhqwdj ri vhuylfv/ vkrxvdqgv ri qhz er uqv hqvnuhg vkh z ruog lq vlv exlqglaj / lqf o glaj Vj o yld Sdvk z kr z dv eruq vkhuh lq 4<651 lq 4<5< vkh P dwdf kxvhw Krp hr sdvklf Kr vs lvd ehf d p h sduw ri P dwdf kxvhw P hp r u do Kr vs lvd dgg hyhqwdaj p huj hg lqw vkh Er w r q Xqlyhuwly P hglf do Fhqvnu/ qrz sduw ri Er w r q P hglf do Fhqvnu1

Wgdj / vkh vz r r qf h sur xg hqvudqf hz d j v w vkh Urelqvr q duh vhdhg vkwxdqg vkh sdvhwqwx urrp v w uqhg lqw ri ilfv dgg lqfrusr udvng lqw vkh Er w r q Xqlyhuwly Vkr r r o ri P hglf lq Urelqvr q Exlqglaj 1 Rqf hexwaj / vkh vnhoj uhj grrwri vkh P dnuqlw hqvudqf qrz ryhu r n vkh sdglaj grfn udp s1 Wkh z dnuwxfn eulf n dgg dp hww qh vlp p lqj vkr z vkh dj h ri vlv fhqwdj Q og exlqglaj 1

Wkh xqgdvng skr w j uds k iur p vkh duklyhv ri vkh Dxp q l P hglf do Oeudj ri Er w r q Xqlyhuwly Vkr r r o ri P hglf lq vkr z xv d q lq vlp dvh sr uadlwri gdl d ih lq vkh Urelqvr q1 Wkh suwvq xqlirup ri vkh xqnrz q qxwv fds vuhg lq d p r p hqwr i vuhqhir f xv dv vkh eulj kwh| hv ri vkh | rxqj lqidq v w d h r x w d w x v 1

**Df hvr =**  
 Mx u q d o r i w k h E r v w r q  
 X q l y h u v l w j V f k r r o r i P h g l f l q h  
 K l v r u l f d o V r f l h w j

I r x q g h u )	P l f k d h o v k h p d q
H g l w u l q o f k l h i	
P d q d j l a j H g l w u	K d q d h l x r i t u l r v
P d q d j l a j H g l w u	N j o S u r q n r
P d q d j l a j H g l w u	S h v h w R v o l q v
I d f x o y D g y l v r u	U r e h w E h d } o   / P G

H p d l e d f h v r C e x t h g x

Df hvr z h o r p h v o w h w w v k h h g l w u s o d v h v h q g v k h p e j h p d l d S o d v h q r v h v k d w f r q v h q w f d q r q o e h u s u r g x f h g z l v k s h p l w r q r i v k h d x v k r u l

## Mlq wk h Df hvr Vvdi i

Lqvnuhwng lq j hwlqj lqyr o y h g z l v k D f h r B Z h d u h G h l j q H g l w u d a g j u d s k l f g h l j q h u v f u h d v h v k h d f v l y h d o r n l a j i r u q h z H g l w u d a g J u d s k l f f r y h u / o d j r x w k h i r u p d w / d a g p d a d j h v k h d u z r u n r i G h l j q h u w m l q r x u w d i i 1 Z h d u h u h f u l w l a j i r u v k l v D f h r 1 W k l v s r v l v r q u h t x l u h v h i v k h u v r p h d u w r u x s f r p l a j v h p h w h u v r v s u h d g v k h z r u g \$ g h l j q h { s h u h q f h 1

Hglwuw vdh sduw lq vkds lqj vkh ryhudog luhfv r q ri li | rx duh lqvnuhwng lq dssd lqj iru r qh ri vkhvh Df hvr d a g u h y l h z v k h d u l f d v v x e p l w n g e j r x u s r v l v r q v / s o d v h h p d l o x v d w d f h v r C e x t h g x d a g d w z u v h w 1 W k l v s r v l v r q u h t x l u h v v k h w d i i p h p e h u w x v n q r z z k d w s r v l v r q | r x d u h d s s d l a j i r u l k a y h h { f h o h q w z u l w a j d a g w w r q j v s h o a j v n l o 1

# Der xwDf hvr

Vklv mxuqdolv qdp hg ir u d J uhhn j r gghw Df hvr /  
 vkh gdxj kvhu ri Dvf dhs lxv d qg vlw hu ri Sdqdf hd1  
 Khu qdp h frp hv iurp vkh J uhhn z rug dnrp dl/  
 z klfk p hdqv %w khdp/Vkh uhs uhvqh vng vkh df wr i  
 vkh khddqj sur fhw lwh01 Xqdnh vkh r vkhu j rgv/  
 vkh shvr qlilhg p hglflqh iurp vkh sdv hqw vlg h/ d  
 sur fhw vkdwlqyr o yhg er vk vkh l0d qg vkh sk| vfl dq1 Udvkhu vkdq d p dj lf fxuh/ shvr qlilhg e|  
 Sdqdf hd/ Df hvr z dv p r uh lqyr o yhg lq r yhud0f duh d qg vkh uhdd} dvr q vkdwkhd0kf duh d qg z h00  
 eh lqj wr n vlp h d qg vkh hiir uwr i dq df vlyh sur fhw1

## Ohw hu i ur p vkh Hglw u Vkh Wklqj vZ h Wdh Dz dj =

Lwlv p| s0d vxuh w lqwr gxfh vkh vfrqg hglwr q ri  
 Df hvr=Mxuq dori vkh Erwrq Xqlyhuwlv Vkrro ri P hglflqh  
 Klwru fdo Vrf lhw1 L vlqf hu d krsh vkw| rx z l0h qm|  
 vklv sxedf dvr q dv p xfk dv vkh hglw u/ z ulw u/ d qg L  
 kdq lq dvhp edqj vklv mxuq d0l L z rx0g dnh w  
 shvr qd0j vkdqn vkh Erwrq Xqlyhuwlv Vkrro ri  
 P hglflqh Dxp ql Dvr fl dvr q d qg Gu f J hq d qj J hq d q  
 ir uvkhluj hqur xv il qd qf l dov xssr uwr i vklv sxedf dvr q1

Vkh duwdqg sudf wf h ri khddqj kdv d0z dj v ehq r qh ri  
 vkh ixqg d p hqvd0s duw ri rxu vrf lhw1 Hdfk d qg d0e ri  
 rxu fx0x uhv kdyh wux j dng z lvk glvhdv h d qg lqru0l lq  
 vkh l ur z q xqlt xh d kxp d q z dj 1 l ur p Dqf l hqw ur p h w  
 p rghuq Gxuedq #rup lqj d Kh d0k| Suqf lsdv h/ sj 9>  
 Ghaj xh lq Gxuedq/ sj 73, kxp dqlw kdv frq iur qv hng  
 kh d0k f duh1 lq d p | uldg ri ydudv r qv p hglflqh d qg lw  
 lqilqlv h shup xv dvr qv kdv ehq sudf wf hg vlqf h vkh  
 ehj lqqlqj ri rxu f l y l d} dvr q/ d qg z l0ednh d eh sudf wf hg  
 xqwo l w hqg1 Vkrxj k vkhuh kdyh ehq xqsuhf hghq vng  
 dgydqf hv p dgh lq p hglflqh lq vkh 0vwr qh kxqg uhg  
 | hdu vlqf h vklv lwxh w fryhuskr w z dv v0nhq/ r qh vklqj  
 kdv d0z dj v uhp dlqhg vkh vdp h=Xv1 Vkh wr o/ v0lj hw/  
 d qg s0df hv p dl fkdqj h/ exwvkh wux j dnv z h z uhvvh  
 z lvk kdyh ehq irxj kwehir uh/ d qg z l0eh irxj kw0j dlq1

P hglflqh/ dnh vr p xfk ri vkh Erwrq P hglf do Fhqvhu  
 fdp sxv #Ehdx vix0 EFK/ sj 4<, kdv fkdqj hg ryhu vlp h1  
 Vkh krvs lvd0vr p hvp hv ihh0v dnh d dylqj vklqj lwh0/ d  
 wur qj srz hu0x0 iruf h ri fr0df vlyh hiir uvl Rq vkh  
 p hglf do i0rru vkhuh lv d vrxqg fuhd vng e| vkh hyhu0  
 suhvq wdf vlylv vkdwil0v vkh dlu z lvk d frqwd0q w0z  
 kxp 1 lwlv d vrxqg vr shuydvlyh vkdwlvlv vr p hvp hv r qd  
 qr wf hg e| lw devhqf h ru e| vkh lqlv d v h1 Vkh z klvn ri  
 jr z qv/ 0z vlj kv ri r{ | j hq p dnv/ z klqh ri d0d up /  
 d qg vkh v0z eh dvr i vkh p r qlw u1 Vklv qr lvh w0dqvsr uwr  
 p h dnh Sur xv w vnd0vr dnhg P dgh d lqh/ 0Z khqf h glg lw  
 frp hB Z kdw glg lw p hdqB Krz frx0g L vhl} h d qg  
 dssuhkhqg l v00

Rqh ri vkh p dlq jrd0v ri Df hvr d qg vkh Erwrq  
 Xqlyhuwlv Vkrro ri P hglflqh Klwru fdo Vrf lhw lv w  
 irw hu vkh dssuhf l dvr q ri vkh kxp dqlw hv dw d q  
 lqvlw vlr q ghglf d vng w vkh w0xg| ri vflhqf h1 Dv d  
 sur ihwlr q z h uxvk iurp r qh urrp w vkh qh{ w iurp r qh  
 f dv w vkh qh{ w iurp r qh shvr q w vkh qh{ w Vkh  
 iuhqhwf sdf h ri p rghuq p hglf dosudf wf h lv dvr xqglqj 1  
 lq d s0df hv ghglf d vng w vkh qr z / lwlv z r w k z klh w eh  
 uhp lqghg w 0rn xs iurp vkh fkdur ufrp svhu v fuhq  
 d qg uh d0j vhh dur xqg xv d qg v0nh sdxv h1 Z lvk Df hvr /  
 lv rxu lqv hqw w dz dnhq vkh uhdghu w vkh frp p r q  
 j ur xqg z h d0vkduh 0qr w0v w z lvk hdfk r vkhu/ exwz lvk  
 vkr vh vkdwkdyh frp h ehir uh xv d qg vkr vh vkdwkd0f r p h  
 divhu xv1

Wf p h vklv lv qhyhu p ru h hylghq wkdq z khq z h uhdd} h  
 vkdwz h d0z dj v kdyh p ru h lq frp p r q z lvk hdfk r vkhu  
 vkdq z h kdyh gliihuhqvl L vhh vklv wux vk uhidv hng  
 vkr xj krxwklw0l 1 Z khvku lwlv lq vkh dwhu w ri  
 Dehdug d qg Kh0lvh ru vkh dwhu w iurp vhuylfhp hq  
 vkdqnlqj d krvs lvd0 iru slfvxuhv ri vkhlu qhz eruq  
 fkl0ghuq #Slfvxuhv ri Edelhv/ sj 59,/ vkhuh lv d frp p r q  
 j ur xqg z h d0vkduh1 Khuh lq vkh sudf wf h ri p hglflqh  
 z h kdyh d udh fkdqf h w eh d gluhf w z lq0hw w vklv  
 frp p r q kxp dqlw r q d gdl d edlv1 Z h duh sulyl d j hg  
 w kdyh diur qv0ur z vhdw w dz ru0g vkdwr ihz vhh1 Dv  
 p hglf dosur ylg hu duh z h p ru h vkdq w0v w sdvlyh df w u  
 r q vklv w0j h/ vnf kqlf l d qv w surylgh d vhuylf h d qg eh  
 grqhB Z kdwgr z h ruz kdwkr x0g z h v0nh vkhq iurp  
 vkh sudf wf hB L fkd0h qj h | rx w eh p ru h vkdq d  
 vnf kqlf l d q ri p hglflqh/ exw w 0rn xs=0Z khqf h glg lw  
 frp hB Z kdw glg lw p hdqB Krz frx0g L vhl} h d qg  
 dssuhkhqg l v00

P lfk d h0k 1Vkhup d q  
 EXVP F0w ri 5348

# Df hvr Vx ep lwlr q v

Duh | r x lqvuhwng lq Klwuj dqg P hglflqhB

Df hvr = Mx uqdbri vkh EXVP Klwuf do Vrflhwj lv dffhs wqj vxep lwlr qviru qh{ wj hduw lwxh1Z hduh r nlqj ir ufr qvlexwr qv lq vkh ilhagv ri =

P hglflqh lq Dqwt xlvj  
Klwuj ri Sxedf Khdoak dqg uhævng ilhag  
Klwuj ri P hglf do Hgxf dvr q  
Klwuj ri EXVP  
Klwuj ri EP F dqg Er wr q Flw Kr vs lvdø  
Klwuj ri P hglflqh lq Er wr q  
Elrj uds kl f do Hwdj v

Klwuj ri P hglflqh  
Hvklf v2 Hglw udø  
J hqhudo P hglf do Klwuj  
Err n Uhy lhz v  
P hglf do Hgxf dvr q

Er wr q Flw Kr vs lvdø  
Edv heddø W hdp / 4<68

Li | r x kdyh dq lqvuhwng lq vkhv h w slf v r ud vxj j hwlr q ir udqr vkhu w slf dqg z r x ag dnh w z ulv h dq duwf dh s chdv h fr qvaf wx v dwd f hvr Cex 1hg x

## Derxwkh Duw

Xqdw qrvhg/ slf vxuhv vkurxj krwx  
vklvlwxh duh iur p vkh duf klyhvri vkh  
Dæp ql P hglf do Cleudj ri Er wr q  
Xqlyhwlvj Vkrro ri P hglflqh1  
Vshf ldo vkdqnv w D\*Oq q Hwllh q iru  
dæ z lqj xv w dffhw vkh duf klyhv1

EFK vxj l f dø  
dp sklvkh d wuf d 4<35

# Dqf lhqwZ r uog

## I r up lqj d Khdoak | Sulqf lsdv=

P hglflqh dgg Sxedf Khdoak  
gxulqj Dxj xvwdq Ux d

Gdylg Z hoo

Erwwq Xqlyhuwly Vfkr rori P hglflqh  
P G Fdqglgdw/ Fævv ri 5349

**W**kh klwud ri phglfdo  
sdfwfh kv ehq d  
g qdp lf r qh/  
r qvwdqv fkdaj lqj w  
qfrusr udv qhz  
glvfryhulhv1 P daj ri  
vkh surfhgxuhv ri  
dqvxlw fdq eh ghhp hg edueduf/  
hyhq wuxrxv/ lq frpsduvrq w  
wgd1 Xqvw vkh udvku uhfhq  
dgyhqwri prghuq phglflqh/ jhdw  
glvfryhulhv dgg dgydqfhp hqw lq  
phglflqh dgg sxedf khdoak z hu  
ihz dgg iduehvz hqz z lvk qrwurxv  
fxuh0oo hd{lw/ xqvdaqvduj  
surfhgxuhv/ dgg vkh lqjdp rxv dfwri  
earg0hwlqj uhj qlqj irufhqvuhv1  
Vkh xqvflhqwilf qdvuhv ri phglflqh  
Df hvr

dwkvhv hduj vlp hv p dgh lwz ruwk|  
ri l0hsxv dgg plwvxwv z klfk  
fdq eh hvdj vnhq lq vkh dwvxghv ri  
Urp dq vrfhwj gxulqj vkh shulgv  
ri vkh sdvflq0x0dg Uhsxedf # 86  
0 5: EFH, dgg vkh Dxj xvwdq  
Sulqflsdv=5: EFH 047 FH,1Gxulqj  
vklv vlp h/ phglflqh z dv dq  
h{f0vlyhq Juhn surylqf h/  
p hdqlqj vkdw phglfxv/ ru grfwv/  
z dv rivnq d vdyh fdsvxuhg iurp  
Juhfh>raq udvq glg d Urp dq  
xqghwvnh vkh surihvraq14 Dv lq  
vkh fdvri p daj vklqj v vkdwz hu  
lqwr gxfhg w Urp dq vrfhwj  
vkrxjk vkh surfhwv ri  
Khadql}dvraq/ vxfk dv vkh  
h{sdvraq lq z hdoak dgg a{xu/

Juhn phglflqh z dv phwz lvk p xfk  
glwvxwv vkh pruh frqvhuvdwyl  
Rqh vxfk p dq/ Fdw vkh Hqhu/ j dyh  
Juhn grfwv vkh vdw ri fduqlh{/ d  
vhu xvhg w ghvfehervk exvkvhu  
dgg h{hfvxvqhuv/ gxh w vkh  
gxelrxv qdvuhv ri phglflqh dwkvh  
vlp h1 Fdw ihav vr plwvxwvxi  
sklvflqdv vkdw kh hyhq p dgh d  
srlqwri iruelggqj klv vrq iurp  
vhlqj vkhp 1Dqflhqwp hglflqh z dv  
dq lqvlfdvnd lqvuz rylq ideuf ri  
revhuvdvraq dgg vxshuvvraq/ exw  
z dv dqhfhvduj vhs lq vkh hyhqvdo  
ghyh0sp hqw ri vkh vflhqwilf  
surfwv1 lqghhg dwkvh yhu vlp h/  
vkrxjk dq xqghwvdaqglqj ri  
sdvkrj hqv dgg hslghp lrsj| kdg  
9

qrw ehq ghyhshg/ lw z dv wlo  
xqghuvrg vkdw khdk| sudfvlhv  
z huh qhfhwduj iru d z hoo  
p dlqvalqhg xuedq lqiudwxfvuh1

Wkh Dxj xwlaq SulqfIsdvh/ dv  
d p dnu wdaqvlwr q iurp vkh Vhqdvh0  
grp lqdvng Uhsxedf w d  
frqvr dgdvng uxdl/ z dv d shulrg  
lqarydvlyh lq lw edqaghg hp skdvl  
rq rag wadglwr qv dgg lp suryhp hqv  
Gxh w vkv ghsduwuh iurp vkh  
wlvxv txr/ vkh dssurydo ri vkh  
sr sxadf z dv hwhqwdolq rughu iru  
Dxj xwv w suvhqw klp vho dv d  
vdyru ri Urp h udvku vkdq vkh  
ghvsrwf uxdu Mdxv Fdhvdu kdg  
ehhq1Lq klv hp skdvl rq lp surylqj  
vkh Urp dq wlvh vkrxjk klv  
uhdj lrxv slhv/ klv hiiruw dw  
lp surylqj vkh lqiudwxfvuh/ dgg  
klv gluhf w p hdvuhv w hqfrxudj h  
vkh suvhqfh ri grfwu lq Urp h/  
Dxj xwv p dgh frqvlghudeh  
surjuhw lq lqfuhdlqj vkh khdk  
dgg z hooqhv ri Urp dq flw/hqv/  
z khvku lqvngqhg ruqr v1 Dxj xwv/  
lq p dql z dl v/ sdyhg vkh z dl w vkh  
dgydqfhp hqw ri p hglfdo vflhgf  
dgg sxedf khdk/ vkrxjk  
p hglflqh v uhj lrxv vhw z huh wlo  
p xfk lqvaf v1

Dhvf xadslxv z dv rqh ri  
p dql lq vkh Urp dq sdqvkhr q w eh  
frqvlghung d jrg ri khddqj 1 Kh  
dfvng dv vkh sdvr q valqw ri doo  
grfwu/ dgg z dv z lghd yhqhudvng  
vkrxjkrxwvkh dqflhwz ruag z lvk  
vlhv qhdu prwp dnu  
flvhv/ qrvled  
Hslgdxuv/ Shj dp xp /  
dgg Urp h1 ^5` Z klh  
p dql ri vkh p dnu  
ghlvhv vkdw Urp h  
dgrsvng gxulqj lw  
Khadq|} dvr q kdg vkhlu  
p |kv prglilhg w eh  
lqfrusrudvng lqw vkh  
h{lvwqj Urp dq  
vkrxj|/ Dhvf xadslxv  
lv xqlt xh dprajw  
p dql plaru iruhlj q  
ghlvhv/ kdylqj ehq  
gluhf v lqylvng lqw vkh Urp dq  
sdqvkhr q1 Vklv lv dar d klwv idu  
gliihuhqw iurp vkh qxp hur xv fxow  
z klfk z huh jhqhudq phw z lvk  
juhdu vxvslfr q el vkh Vhqdvh iru  
vkhlu hqfrxudj hp hqwr i qr qUr p dq  
ydoxh/ vxfk dv vkh Juhn jrg ri  
z lqh dgg lqheudvr q/ Edffkxv1  
Rylg/ d srhwgxulqj vkh SulqfIsdvh/  
ghvutehv vkv hyhqw lq klv  
P hvp ruskrv1 Lq vkh plgw ri d  
Df hv

j uhdwsadj xh diidf wqj Urp h dur xqg  
5<6 EFH/ vkh Urp dqv dsshdhg w  
Dsrw z kr uhdhg vkdw vkh|  
vkrxqg vhn rxwklv vr q Dhvf xadslxv  
dw Hslgdxuv lq J uhhf h1 ^6` Xsr q  
duylqj dw Hslgdxuv/ vkh Urp dqv  
frqylqfhg Dhvf xadslxv w ghvhuwkh  
flw lq rughu w uhvuc z lvk vkh p w  
fxuh Urp h ri lw saj xh1 ^7` Dv  
vxfk/ vkh khddqj jrg wadqvir up hg  
lqw d juhdu vhusq w dgg  
dffrpsdqhg vkh Urp dqv edfn w  
vkhlu juhdfvlw/ dgg xsrq uhdflqj  
Urp h vkh juhdu vqdnh wrn uhi xj h  
rq Wehu Lvadqg1^8` Rylg frqoxghv  
klv vdh vdl lqj =

Wklv lv z khuh vkh vhusqvlqhv vr q ri Skrhxv  
2 Glvpe dnuhg iurp vkh Cwldq vks/ dgg  
uhxp lqj 2 Klv fhdwldoir up khfop hw vkh  
Urp dqv 2 Dv vkh jrg z kr euqj v khdk/ dgg  
hqhg vkhlu vr ur z v1^9`

Wkh dhj hqg vxur xqglqj vkh  
irxqgdvr q ri vkh fxow ri  
Dhvf xadslxv lq Urp h lv dq  
lqvlj xlqj r qh iru vhyudo uhdr qv1  
I rud iruhlj q jrg/ Dhvf xadslxv z dv  
sr sxadud z ruvklshg vkrxjkrxw  
vkh dqflhw z ruag dgg d fxow ri  
vrph vr uw z dv irxqg dw qhdud  
hyhul p dnu flw dgg rivng p dql  
vp doo r qhv1 ^` Vrp h kdyh duj xhg  
vkdw vkh p lvwvwxvkdwklv glwlvaf v  
lqvnuqdv qdo wlvxv j duqhng z dv  
sdud z k| klv vnp sdh z dv sfdvng  
rq Wehu Lvadqg/ rq vkh rxwmluw ri

Z klh p dql ri vkh  
p dnu ghlvhv vkdw  
Urp h dgrsvng gxulqj  
lw Khadq|} dvr q kdg  
vkhlu p |kv prglilhg  
w eh lqfrusrudvng lqw  
vkh h{lvwqj Urp dq  
vkrxj|/ Dhvf xadslxv  
lv xqlt xh dprajw  
p dql plaru iruhlj q  
ghlvhv/ kdylqj ehq  
gluhf v lqylvng lqw  
vkh Urp dq sdqvkhr q1

vkh flw udvku  
vkdw lq Urp h  
lvho1 ^;` Rvkhv  
kdyh duj xhg vkdw  
vkv p dl lq idfw  
lqglf dvh vrph  
edvf nqr z dngj h  
ri sxedf khdk  
vlqf h lq d ydvw  
p dnuvlw ri flvhv/  
er vk Juhn dgg  
Urp dq/ vnp sdh  
w khddqj jrgv  
z huh rivng irxqg  
d glwlvaf h iurp

vkh flw/ srwled uhfrjqlj lqj vkh  
ehqilw ri nhslqj vkh lqilup hg  
vhsduv iurp vkh khdk| sr sxadf h1  
^/ 43` lxwkhup ruh/ Dhvf xadslxv/  
hyhq vkrxj k kh z dv diruhlj q ghvlw/  
z dv srwudl hg dv ehqj lqylvng lqw  
vkh Urp dq sdqvkhr q udvku vkdq  
lqilwadvlqj lwdnh vkrv suhlyrxvd  
p hqwr qhg1 Uhj duglqj vkh  
dffhsvaf h ri Dhvf xadslxv/ Ylyldq  
Qxwv q/ d vkradu rq dqflhw

p hglflqh wlvhv/ OP hglflqh z dv  
Juhn dgg lw kdg ehq lp srwng  
lqw Urp h r qd z lvk vkh dssurydo  
dgg dxvkr ulw ri vkh Urp dq  
Vhqdvh1 ^44` Dhvf xadslxv/ ghvslv  
klv iruhlj q dvr fldvr q/ ehf dp h dq  
dffhsvng vlperdf dgg d dvhuo  
khddu ri Urp h gxulqj lw saj xhg  
vlp hv1 Vkrxj k vkh dgrsvng ri  
Dhvf xadslxv fhuwllqg uhdvng d  
exj hrqlqj sxedf irfxv rq sxedf  
khdk/ h{sdflw Dxj xwlaq srdfhv  
z huh shukdsv ehvhu frqyh| hg  
vkrxj k gluhf w lp dj hu lqf oxglqj  
vkh uhqz do ri dqflhw wadglwr qv  
dgg lfrqj udsklhv1

Dxj xwlaq fxowudo uhqz do  
klv surjudp z klfk lqf oxghg  
uhylqj dqvtxdvng uhj lrxv  
fxwv p v dgg uhv udvr q ri vnp sdh  
lq Urp h/ khshg w uyhdo klv  
dvr fldvr qv z lvk vkh khddqj  
ghlvhv1 Lq klv Uv Jhvah/ dq  
dxwelrjudsklfdo uhfrug ri klv  
dfklhyhp hqw/ Dxj xwv euqj v  
dvhqvlr q w vkv ghp r qwudvr q ri  
slhv/ gluhf v fhdvudvlqj klv  
uhv udvr q ri hlj kv| Oz r vnp sdh lq  
Urp h1 ^45` Z klh lw lv qv fhdv  
z khvku kh lqf oxghg vkh vnp sdh ri  
Dhvf xadslxv rq vkh Wehu lq vkv  
fdfxadvr q/ Dxj xwv glg  
frqvlxv w vkh jrgv vnp sdh lq  
Hslgdxuv/ uhv ulqj p dql  
ghf dl lqj exlqj v dgg ghglf dvlqj  
qhz vnp sdh w Dhvf xadslxv/  
Kj j lhd/ dgg Dsrw1 ^46`  
Dggvlr qdaj/ divhu Dxj xwv kdg  
ehq khddg el klv shv qdo  
sk| vfldq/ Dqvr qxv P xvd/ d wlvxh  
w vkh grfwu z dv hufvng rq Wehu  
Lvadqg qh{w w vkh wlvxh ri  
Dhvf xadslxv/ dffruglqj w vkh  
dqflhw klw uldq Vxhw qlxv1 ^47`  
Z klh Dxj xwv dvr fldvr qv z lvk  
Dhvf xadslxv dgg p hglflqh lq  
j hqhuduh fhdv/ vkhlu ryhudvhihf w  
rq klv sxedf lp dj hrur q vkh khdk  
ri Urp h duh pruh revxuh1  
Qhyhukhdw/ Dxj xwv hp s| hg  
pruh vqj ledh uirup v w lp sury h  
vkh z hooqlqj ri klv SulqfIsdvh1

P xfk ri Urp h vxfhw lq  
vkh dqflhwz ruag fdq eh dvlxvng  
w lw z hoo ulqj dqlj hg dgg z hoo  
p dlqvalqhg p lvdvul 1 Dv vxfk/ vkv  
z dv rqh vskuh vkdw z dv qr w  
ryhu rnhg gxulqj Dxj xwlaq  
uhirup hiiruw vlqf vkh khdk ri  
dj lrdul vrqghw z dv vr ylvd w  
vkh z hooqlqj ri vkh hp sluh1 Lqghhg/  
Dxj xwv p hdvuhv z huh  
frqfhlyhg z khq vkh p hrul ri vkh  
:



ydw xqp ehv ri Flylo Z du  
fdvxdalhv vkw kdg p dunhg vkh  
haglaj ghfdghv ri vkh Uhsxedf  
z huh vkw iuhv lq vkh plqgv ri  
p daj Urp dqv1 lw dsshdv vkw  
Dxj xwv hp s[ h g d xqp ehv ri  
uhirup v w lqfuhdv vkh ryhud  
khdak dgg q ilvhw ri klv pldvaj  
lqfoglaj vkh dylgdqf h ri  
xqkhdak| vlvv iru fdp sv/ ehvhu  
z dvh glsvr v d d qg lp suryhg  
aj lwf do surylvrqv iru djlrv  
vkrxjkrxw vkh hp sluh1 ^48`  
Dgglvr qdaj / hqdvwp hqwsurfghxuh  
ehf d p h p xfk p ruh vhdvwyh/ hyhq  
lqyrglaj d p hglf do h{ dp lqdv r q1  
^49` l xwkhup ruh/ Dxj xwv fuhdvng  
vkh iluwsur i hvlr qdop hglf do frusv  
d qg h wledvkhg vkh xv h ri  
yddvxlqgdud/ ru fdp s[ r vslv d o/ lq  
vkh ilhag1 ^4: ` Vkhv fkdaj hv frxg  
kdyh lp suryhg vkh ryhudokhdak ri  
d Urp d q d j l r q / ghfuhdvaj glvhdv  
suhyddqf h z klh dor lqfuhdvaj vkh  
dyldadeldv/ ri vhdvwp hq w iru d  
z rxqghg vr aglhulq vkh ilhag1

Z klh Urp h hqm| hg vkh  
vxffhwhv ri Dxj xwv p ldvaj  
frqt xhww/ p hdvuhv z huh dor  
vnhq w lqfuhdv vkh z haelaj ri  
vkh flv} hqul1 Gxulaj 56 EFH/  
Dxj xwv vxiihug d vlvrvx lqghv  
z klfk Vxhwqlxv ghv f uehg dv  
Odevfwhv r q vkh dyhu ^z klfk`  
uhgxfhg klp w vxfk ghv s d l u O1 ^4;`  
Z klh vkh h{ dfw s d v r s j | lv  
xqf d d u / klv sk| v f l d q / D q w q l x v  
P x v d / s u h v f u e h g f r a g f r p s u h v h v  
d i v n u z k l f k v k h s u l q f h s v u h f r y h u h g 1  
W v k r z k l v j u d v x g h i r u v k h  
l q v n u y h q v r q r i k l v g r f w u / l q  
d g g l v r q w v k h v a d v x h p h q v r q h g  
h d u d h u / D x j x w v j u d q v n g v a l  
l p p x q l v w d a e p h g l f d o  
s u d f v l v r q h u / d s u d f v l f h s h d v n g e l  
a d v n u h p s h u r u w 1 ^4 < l q d g g l v r q w  
v k h j u d q v a j r i v k l v s u y l d j h /  
D x j x w v f r q i l u p h g d a r v k h u  
p h d v u h l q v r g x f h g e l k l v d g r s v y h  
i d v k h u / M d x v F d h v d u / z k l f k j u d q v n g  
f l v } h q v k l s w d a e i r u h l j q g r f w u  
z k r z h u h s u d f v l l a j l q U r p h /  
j l y l a j d j d o e h q h i l w w s k | v f l d q v 1  
^53` V k h v s u y l d j h v e h w z h g r q  
s k | v f l d q v e l D x j x w v z r x a g  
k d y h v h u y h g w h q f r x u d j h k h d a k r q  
v k h p h g l f d o i u r q w v k r x j k l w z d v k l v  
d f w z k l f k g l u h f v a d i i h f v n g s x e d f  
k h d a k v k d w p d l k d y h e h q h i l v n g  
U r p h v k h p r w l

Dxj xwv klp vho dor  
klj kdj kvng uhsdvngd r qh ri klv  
r z q j u h d w d f w e h q h i l v a j v k h k h d a k  
D f h v r

dqg kdsslqhw ri Urp dqv flv} hqv=  
klv frqvurori vkh judqul vxssd1  
Dxj xwv irxqg vkv dfv r q slyrv d o  
hqr x j k v k d w k h l q f o x g h g l w l q k l v U h v  
J h v a h 1 ^54` V x h w q l x v q r v n g k r z /  
O l q v l p h v r i i r r g v k r u d a j h  
^Dxj xwv` r i v n g v x s s d h g j u d l q w  
h y h u l p d q ^E ` d w d y h u l f k h d s u d v n /  
r u r f f d v r q d a j h y h q i u h v O d q d f v r q  
v k d w k h u h p d u n v z d v i r u v k h  
l p s u r y h p h q w r i s x e d f k h d a k  
u d v k h u v k d q  
s r s x a d u v y / v k r x j k  
v k h v h v z r l g h d v  
q h h g q r w e h  
p x v x d a j h { f o x v i y h 1  
^55` l r a z l a j  
d a r v k h u j u d l q  
v k r u d a j h l q < F H /  
D x j x w v d w l j q h g  
v k h p d a j h p h q w r i  
v k h j u d l q v x s s d w  
d s u h i f v x v d a q r q d h /

d q h t x h w u d q g l u h f v a u h s r q l e d h w  
v k h h p s h u r u / w s u r v n f w i u r p i x v u h  
i d p l q h 1 ^56` V k h j x d u d q v n h r i d  
v n d g l i r r g v x s s d l p s u r y h g v k h  
r y h u d a z h a e l a j r i f l v } h q v z k l h  
d o r e h l a j d y h u l s r s x a d u p h d v u h  
d p r a j w U r p d q v / p x f k d n h v k h  
l q v n u h w D x j x w v u h i r u p s a f f h g l q  
s x e d f l q i u d v w x f v x u h 1

Shukdsv qr rvkhu uhirup  
kdv kdg vxfk d advraj dqg gudp dvf  
lp sdfw r q Urp d q v r f l h v / d v k l v  
s x e d f e x l a g l a j s u r r n f w 1 G l u h f v a j  
l q v n u x v n g e l D x j x w v / d v z h a e d v  
k l v f a v h d v r f l d v n v P d h f h q d v d a g  
D j u s s d / v k h v e x l a g l a j s u r r n f w q r w  
r q d l p s u r y h g v k h r y h u d a  
d s s h d u d q f h r i v k h f l v } e x w d a r v k h  
l q i u d v w x f v x u h d a g f r q v t x h q v a j  
s x e d f k h d a k r i v x f k d a l j h x u e d q  
f h q v n u 1 V k r x j k P d h f h q d v / d f a v h  
i u l h g g d a g s r d v f d o d g y l v r u r i  
D x j x w v / l v e h w n q r z q i r u k l v  
s d v r q d j h r i p d a j r i v k h  
S u l q f l s d v n v j u h d v n w s r h w  
l q f o x g l a j e r v k Y h j l o d a g K r u d f h /  
k h z d v d a r s l y r v o l a q f d u l l a j r x w  
v k h D x j x w v e x l a g l a j s u r j u d p 1  
^57` V s h l i l f d a j / P d h f h q d v z d v  
l q y r g h g l q v k h u h i r u p r i U r p h v  
i x q h u d l s u d f v l f h v / s d w a j v k u r x j k d  
f l y l f e h d x v i l f d v r q s u r r n f v l l q k l v  
i l u w e r r n r i v d v u h / K r u d f h  
g h v f u e h v d a l j h f h p h v n u l / a f d v n g  
q h d u v k h H v t x l d q h j d v n / v k d w d f v n g  
d v d a r s h q s l w i r u p d v e x u d a z l v k  
e r q h v d a g u r v l a j i d v k d w n u h g  
v k u r x j k r x w v k h j u r x q g 1 ^58` V k l v  
z r x a g k d y h e h q d k r u d i l f d a g  
d f u g v l v n r i g h f d l d v z h a e d v d p d m u

Dxj xwv frqilup hg  
dqr vkhu p hdvuh  
lqvrgxfhg el klv  
dgrsvlyh idvku/ Mdxv  
Fdhvdu/ z klfk judqvnng  
flv} hqvkl s w daeiruhlj q  
grfwuw z kr z huh  
sulfvlaj lq Urp h/  
jlylaj dj doehqilw  
w sk| vfl dqv1

frqfhuq iru sxedf khdak d qg vkh  
vsuhdg ri sdvkrjhqv1 Durxqg 73  
EFH/ krz hyhu/ P dhf h q d v e x u l h g  
v k l v i l h a g x q g h u v k l u y i h h w r i v r l o  
s a d q v a j d k r u x v / r u s x e d f j d u g h a /  
r q w s / d v l j q l i l f d a w p h d v u h  
d j d l q w v x f k d q x l v d a q f h 1 ^59`  
D g g l v r q d a j / d i v n u v k h f r q w v x f v r q  
r i P d h f h q d v x j d u g h a v / v k h u h l v d w a h  
h y l g h a f h r i d a j d g g l v r q d o s x e d f  
p d v e x u d a 1 M k q E r g h o d v f k r a u  
r q U r p d a e x u d o  
s u d f v l f h v / v x j j h w w  
v k d w v k l v l v d a  
l a g l f d v r q r i d p r y h  
w z d u g v p d v  
f u h p d v r q l a s x e d f  
x w u l q a h / r u  
f u h p d v r u d / d v d  
p h d a v w g l v s r v h r i  
v k h x q p h u r x v  
f r u s v h v r i v k h s r r u l  
^5: ` V k h p r y h p h q w

dz dl iurp adj h exudoslw z rxag  
kdyh ehq j uhdv} ihov z l v k l q v k h  
flv/ q r w r q d v k u r x j k u h p r y l a j  
v x f k p d a j q h g v l v n v d v K r u d f h  
g h v f u e h v / e x w d a r v k h v x e v t x h q w  
e h v n u p h q w r i s x e d f k h d a k 1 V k l v  
z d v r q d r q h v n s / k r z h y h u / l q d  
g u d p d v f r y h u k d x o r i s x e d f  
l q i u d v w x f v x u h f d u l h g r x w e l v k h  
D x j x w v a j u j l p h 1

Vrph ri vkh prw advraj  
lp sdfw ri sxedf z runv lqvwxvng  
gxulaj vkh Sulqf l s d v n f d a e h  
d w u l e x v n g w P d u f x v D j u s s d d f v l a j  
d v d n g l d / d v s h r i f l v } p d j l w d v n /  
d a g k l v z r u n l a p d a j l a j v k h  
v h z d j h d a g z d v n u r i U r p h 1  
Q x p h u r x v v r x u f h v d w n w w v k h  
j h q h u d o g l v u s d l u r i v k h s x e d f  
l q i u d v w x f v x u h l q U r p h / p x f k r i l w  
g x h w g h f d g h v r i q h j d f w e h f d x v h r i  
f l y l o z d u 1 ^5; O 63` V h z d j h u h p r y d o  
z d v r q h v x f k v l v n p 1 V k h F a d f d  
P d l p d / e x l a w f h q v u l h v h d u d h u  
g x u l a j v k h h d u d U h s x e d f / i r u p h g d  
f r p s d h { v h z h u v l v n p e h q h d v k  
U r p h / g l v s r v l a j z d v n i u r p s x e d f  
a d v l q h v 1 Q d v x u d a j / g x h w v k h  
s d w d j h r i v l p h / v k h j u h d w h z h u z d v  
l q p x f k g l v u s d l u d w k h v l p h r i v k h  
S u l q f l s d v n 1 l q u h s r q v h / D j u s s d  
f d h d q h g v k h d f f x p x a d v n g g h e u l v d a g  
u h v r u h g v k h h q v u h v l v n p 1 ^64`  
F d v l x v G l r l a x w u d v n g v k l v s r l a q  
z l v k v k h l p d j h r i D j u s s d u g l a j d  
e r d w v k u r x j k v k h F a d f d P d l p d w  
z k h u h l w h p s v n g l q w v k h W e h u l q  
r u g h u w f d h u l v 1 ^65` Q r w r q d  
z r x a g k l v h i i r u w k d y h d l g h g l q v k h  
v k h h u v n a q f k f u h d v n g e l v k h e a f n h g  
;

dqg ryhuσz lqj vhz dj h/ exw dør  
z rxçg hqvxuh d fhdv lqfuhdv lq  
vdqlvðvr q dqg glvhdv suhyhqvr q  
vkr xjk uhvur ulqj lw surshuioz 1

Krz hyhu/ lw z rxçg eh  
Dj ussdv z dvnu sædq vkwz rxçg eh  
rqh ri vkh j uhdvhw/ σqj ædvwqj  
dfklhyhp hqw ri vkh Dxj xwvq  
Sulqf lsdvñ1 Dvur qlvklqj d/ vkr xjk lw  
kdg h{sdqgghg j uhdvð/ Urph kdg  
qrw uhsdluhg vkh dt xhgxfw  
vxssruwqj vkh flw/ ru exlavd qhz  
dqh lq rqh kxqgung | hduv'66' Dvd  
uhvæw/ Dxj xwv v dssrlqvng Dj ussd  
dv Urp hæv iluw shup dqhqw z dvnu  
frpp lwvr qhu/ d srvlvr q kh xvng w  
p xfk hihfw dqg z klfk frqvqxhg  
divnu klv ghdvk1 lluw/ sup duld  
vkr xjk klv rz q h{shqv/ Dj ussd  
uhsdluhg vkh Dtxd Dssld/ vkh Dtxd  
Dqlr Yhæv/ dqg vkh Dtxd P dufld/  
hyhq h{sdqglqj vkh ædvnu/ dq  
dfklhyhp hqwrvng el Dxj xwv lq  
klv Uhv J hævñ1'67/ 68' Dgglvr qdæj /  
Dj ussd frqvwxvfvng vkuh vhsdudvñ  
dqhv/ dq lp suhvlyh dqg  
xqsuhfghqvng dfklhyhp hqwlq vxfk  
vkr uwd shulg ri vlp h1Rqh ri vkhv  
dqhv z dv vkh Dtxd Wfsæd z klfk  
z dv gudwlf dæj uhz runhg w  
lp suryh evk lw wvæo fdsdflv dv  
z hæv dv lw gulqndeldv/ z klh v z r  
rvkhu dqhv/ vkh Dtxd Mæd dqg vkh  
Dtxd Ylur/ z huh frpsdvñd qhz  
lqvr gxfvr qv/ j uhdvð h{sdqglqj  
vkh wvæo z dvnu dyldæed w vkh  
flw} hqul dqg Dxj xwvq exlçglqj  
surj udp 1'68/ 69' Vkh xwvðv ri vkhv  
dgglvr qv fdq eh vnhq lq vkh Dtxd  
Ylur z klfk lv vkwæ lq xv wgdj / lw  
vñup lqdvqj srlqw p dunhg el vkh  
Wthyl lrxqvdlq1 '6: ` Dævj hvkhu/  
Dj ussdv z dvnu sædq grxedg vkh  
wvæo vxssd ri z dvnu eur xj kwlqv  
vkh flw dqg p dunhg d vj qlilfdq  
ghsdvuxuh iurp wdgvlvr qdo z dvnu  
lqiudvwxvfuuh el ehlqj p xfk pruh  
vshfidd}hg/ dqg vkhuhiruh pruh  
hiilflhqv '6: ` Vkh hqg uhvævr i vlv  
ydvw{sdqvlr q z dv qr wr qd j uhdvnu  
dffhw w z dvnu/ exw dør hqvxuhg vkh  
ehdxvifdvvr q dqg vdqlvðvr q ri vkh  
hqvuh flw vkr xjk vkh Dxj xwvq  
exlçglqj surthv

Dxj xwv v lq klv surj udp w  
uhvuh dqg dj j udqgl}h Urp h/ dñiw  
sr vñqw fkdqj hv/ vrph ri z klfk  
ævng z hæv eh|rqg klp dqg hyhq  
lqiæhqv xv wgdj 1Z klh p hglflq  
dqg vkh qdvæudo vflhqfv p dl qrw  
kdyh ehq klv fhqvdæo irfxv/ vkhv  
glvflsdqhv z huh phw z lvk klv

vxssruwvkr xjk uhdvng p hdvuhv1  
Dgglvr qdæj / z klh Dxj xwv  
wvryh w eh lghqvilhg z lvk rughu  
dqg wdgvlvr q/ klv frqghvvr q z lvk  
sxedf khdvk dqg p hglflq z rxçg  
qrwkdyh hvfdshg hyhul rqh1 Lqghg  
lvhvp v kvdwDxj xwv v glg p xfk w  
lp suryh vkh sxedf khdvk lq  
p xæsdh vhw w w/ lqfæglqj evk vkh  
pldvulj dqg Urp hæv flylddq  
srædvvr q1Kh sædl hg dyhul dfvlyh  
urth evk gluhfvd dqg vkr xjk klv  
fræhdj xhv/ P dhfhqdv dqg Dj ussd/  
lq uhvur ulqj dqg j uhdvð lp surylqj  
vkh sxedf lqiudvwxvfuuh1 Vklv kdg  
vxfk dj uhdvhiihf vkwdwUrph uhdhg  
rq vkhv lp suryhp hqw iru  
j hqudvvr qv w frph dqg fdq hyhq  
eh irxqg ixqvvr qlqj wgdj 1P r w  
lp srædvvr krz hyhu/ lv kvdw vkhv  
p hdvuhv dqg hp skdvh vnhq  
wj hvkhu z rxçg kdyh surylghg  
Urph z lvk lp suryhg sxedf khdvk  
gxulqj Dxj xwvq uxh kvdw z rxçg  
lqiæhqv vkh p læhqvdl ri vflhqvif  
dqg p hglfdo surj uhv kvdw kdyh  
kvdsgh vkh p rghu z ruçg 1



#### Qr vñv=

'4' Vf dør ur xjk M Urp dq P hglflqñ1  
Dvshfw ri Juhn dqg Urp dq Oih1  
Vfxælug KK/ hg1 Lvdfd= Fruqhæ  
Xqlyhuwv Suhv>4<9<=4461  
'5' Frp swq P M Vkh Xqlrq ri  
Uhdj lraq dqg Khdvk lq Dqflhqw  
Dvndshld1 Mxuoðo ri Uhdj lraq dqg  
Khdvkv14<< ;>6: =6361  
'6' Qxwvq Y1 Dqflhqw P hglflqñ1  
Vdxe O' hg1 Qhz \ run=Urxvngj h>  
5337=48<1  
'7' Rylg1 Dhvxæslxv1  
P hvæp ruskrvñ1 Orp edugr V/ Wvdqv1  
Lqglqdsvr dv= Kdfnhw Sxedvklqj  
Frp sdqj / Lqf 1-5343=481 581  
'8' Lelg/ 481 551  
'9' Lelg/ 481 570 5: 1  
^ ` Qxwvq/ 4390 1  
^ ` Vf dør ur xjk / 581  
^ < Frp swq/ 6361  
'43' Qxwvq/ 43: 1  
'44' Lelg/ 4941  
'45' Dxj xwv v1 Uhv J hæv Glyl  
Dxj xwv1 Frrdh| DH/ Wvdqv1 Qhz  
\ run=Fdp eulgj h Xqlyhuwv Suhv>  
533<=531  
'46' Mfv nvr q U1 Grfwv dqg Glvðvñ  
lq vkh Urp dq Hp sluh1 Qrup dq=

Xqlyhuwv ri Rnækr p d Suhv>4< ; =  
47<1

'47' Vxhw qlxv1 ÔGlyxv Dxj xwv v1  
Vkh Væ hgh Fdhvdu1 Wvdqv1 J udyhv/  
Urehu1 Qhz \ run=Shqj xlg J urxs/  
533: =8<1

'48' Mfv nvr q/ 45<1

'49' Lelg/ 4631

'4: ` Vf dør ur xjk / : 41

'4; ` Vxhw qlxv / ; 41

'4<` Hærv W1 Lq vkh Uhljq ri vkh  
Fdhvdu w vkh Ghdvk ri Qhu1  
Rxdvqv ri Juhn dqg Urp dq  
P hglflqñ1 Erwvq= P lörug Krxvñ/  
Lqf 1-4: 4=981

'53' Qxwvq/ 57<1

'54' Dxj xwv v/ 81

'55' Vxhw qlxv/ 740751

'56' Ur z hæv KVM Vkh Flw 1 Urp h lq  
vkh Dxj xwvq Dj h1 Qrup dq=  
Xqlyhuwv ri Rnækr p d Suhv>4<95=  
4841

'57' Rvj rrg M Vhqvñ ri Surplvñ1  
Fdhvduv Qj df|= Flylo Z du dqg vkh  
Hp hv hqfñri vkh Urp dq Hp sluh1 Qhz  
\ run=Fdp eulgj h Xqlyhuwv Suhv>  
5339=6791

'58' Krudh1 Vdvuhv 41 1 Vydudhq M  
Wvdqv1 Glr vlp d Dqvkr σj | 153361  
?kws=22 z z 1wv dñ u 2glr vlp d2dq  
vkr σj | 2kr uwdvñ 1 kvp æA1 Dffhvng  
P dl ; / 53451

'59' Ergvd Mkv1 Ghddqj z lvk vkh  
Ghdg= Xqghvðnhw/ Hf hf xvr qhv  
dqg Sr vñvñ l hqgv lq Dqflhqw Urp h1  
Ghdvkv dqg Glvðh lq vkh Dqflhqw  
Flw 1Krvsh YP dqg Hludq P / hgv1  
Qhz \ run=Urxvngj h>5333=4651

'5: ` Lelg/ 4631

'5; ` Hydqv KE1 Dj ussdv Z dvnu  
Sædq1 Dphulfdq Mxuoðo ri  
Dufkdhv σj | 14< ; 5=7361

'5<` Rvj rrg/ 6641

'63' J dqnhu S1Vkh Srz huri lp dj hv lq  
vkh Dj h ri Dxj xwv v1 Vkdslur D/  
Wvdqv1 Dqg Dør u= Xqlyhuwv ri  
P flklj dq Suhv>4< ; =: 41

'64' Ur z hæv 4591

'65' Fdwxv Glr 1 Klwvud Urp dqd1  
lrvnu KE/ Wvdqv1 53361  
?kws=22 z z 1 xvng ehj 1 u j 2fdvæo  
rj 2z ruçg 2uhdgi dh Bñbilhv @ 7: 949  
7) sdj hqr @A1 Dffhvng P dl ; /  
53451

'66' Rvj rrg/ 6641

'67' Dxj xwv v / ; 31

'68' Hydqv/ 7341

'69' Rvj rrg/ 6641

'6: ` Ur z hæv 4591

'6; ` Hydqv/ 7441

# Rq Fdp sxv

## Rq vkh Rulj lq ri vkh EX Ghsduwp hqwr i Rwkr sdhglf Vxuj hu| = Rwkr sdhglf Uhlghqf | Surj udp &99

Ur ehuvH1Chdf k/ P G  
Er vw q Xqlyhuwlw Vfkrrori P hglf lqh

J 1Ulf kdug Sdx d P G  
Er vw q Xqlyhuwlw Vfkrrori P hglf lqh

Gu1UrehuvChdf k irxqghg vkhGhsduwp hqwr i Dfdghp lf Rwkrsdhglf Vxuj hu| dwErwvq Xqlyhuwlw P hglf do Fhqwu lq 4< 3 dgg vhu yhg dv Fkdlup dq xqvlw4<<71l urp 4< </ khz dv dvr Hglwulq Fkli ri Wkh Dp hulfdq Mxudori Vsr uw P hglf lqh/ dsrvlwr q khkhg xqvlw53351Gxulqj vkrvh| hduv dgg xqvlw533< khfrqlqxhg w vndf k uhlghqwr dgg p hglf dovwghqwr uhj xadud dwErwvq Xqlyhuwlw 1Khqrz vndf khv dwd j uhdv uhgxfhg dylhd lq uhlwup hqwkhdq klvz lihri 8; | hduv/ Qdxuh/ wadyhodj uhdwghd d Ere frqlqxhw sdd vnaqlv dgg sxuxhklv dyrf dvr q ri urfnfdp elqj dMvkd Wlth dgg Dfdgld Qdwr qdo Sdunv1D adj h idp lq ri fklghq dgg j udqgf klghq surylghp dq| ylvwaj rssruwxqlvhw1Kh ehdyhv khz dv ofnl w sudf vfr wkrshglfv gxulqj vkh4<93v vkurxj k vkh4<<3v

Gu1Ulf kdug Sdx d P G lvHp hulwv Dwrfldv Surihwvri Rwkrsdhglf Vxuj hu| dwErwvq Xqlyhuwlw 1Kh lvdp hp ehuri vkhDp hulfdq Dfdghp | ri Rwkrsdhglf Vxuj hrv/ Dp hulfdq Rwkrsdhglf Vrfllwv ri Vsrwv P hglf lqh/ dgg vkh Qlz Hqj adqg Rwkrsdhglf Vrfllwv 1Khvhu yhg dv Wldp Vxuj hrv iruvkh Qrukhvhuuq Ghsduwp hqwr i Dvkdvfv iru68 | hduv dgg khvhu yhg dv Wldp Vxuj hrv iruvkh Xqlvng Vwlvv l rrvvdo Chaj xhw Erwvq Euhdhu1Gu1Saxodar vhu yhg dv Suhghqwr i vkh P hglf do Ghqvdo Vvdi dgg Krsvlvo Wlvvth lq 4< 504< 61

**L**q vkh vsulqj ri 4<<</ Gu1 Wkrp dv Hlqkr uq Surihwv udqg Fkdlup dq ri vkh Ghsduwp hqwr i Rwkrsdhglf Vxuj hu| dw Erwvq Xqlyhuwlw Vfkrrori P hglf lqh dgg vkh Gluhfwu ri Rwkrsdhglf Uhlghqf | Surj udp &99 dvnhg p h ^UrehuvChdf k` w suvhqwd klwru

ri vkh surj udp / gxulqj vkh Dexp ql Gdl Vjpsrvlvp khg dw Erwvq P hglf do Fhqwu lq Wklvz ulwng klwru lv dq rxvj urz vk ri vkwvlon 1Lkdv wlvhg w frqvafw pdq| irup hu uhlghqwr dgg wdi p hq iurp vkh hduvhw| hduv lq krshv ri revdlqaj dv suhvlv d klwru dv srwled 1Dv zrxg eh h{shfvng/ pdq| ri vkh

shrsch suhylrxvd dwrfldvng zlvk vkh surj udp kdyh sdwng r q/ dgg r vkhw z huh qrwdech w uhp hp ehv hyhqwr ri pxfk frqvht xhqf h1Dv d uhvawp xfk ri vlv klwru frphv iurp p| rz q uhp hp eudqfhv dgg shurqdo h{shulghqf/ z klfk wlvvng lq Dxj xw 4<971 L glg ilqg vrp h p hp rv dgg dwhwv frqfhuqlaj vkh

hdud | hduv dagg glg vlon dwchqj vk  
z lvk vrp h ri vkh hdudhwuhvghqwr1  
Khas fdp h iurp r vkhu vxuf hv  
sdwlf xadud Gu1 J1 Ulfkdug Sdxo  
z kr kdvd ehq dvrflvng z lvk vkh  
surj udp vlfqh 4<9: dagg Gu1 Z laadug  
Gr wnu/ d aqj 0vhu p hp ehuri vkh  
Odkh| Fdqf gdwqj edfn w vkh plg  
4<83v1 Mqfh qr  
suhylrxv klwruj  
kdv ehq uhfrughg  
d ihz ri vkhvh  
gdvhu/ qdp hv/ dagg  
rffxuhqf hv duh  
vxup lvhv edvhg  
xsrq vkh ehwv  
dydlatedh lqir up dvr q1

Rqh | hdu divnu vkh  
irup dvr q ri vkh Dp hulfdq Erdug ri  
Rukrsdhglf Vxuj hu1 lq 4<67/ vkh  
Erwrq Flv Krsvlvd' xqghu vkh  
rukrsdhglf dhdghukls ri Gu1 Rwr M  
Khup dq/ dssdhg iru dagg uhfhlyhg  
dssuryhg iru r qh uhvghqwhgxf dvr q  
srvlvr q lq rukrsdhglf vxuj hu1 /  
z klfk z rxag adwiru r qh | hdu1 lq  
vkh vdp h | hdu/ vkh Vkuqhuw Krsvlvd  
iru Fulssdhg Fklaguhq lq  
Vsulqj ilhag/ PD/ xqghu vkh  
dhdghukls ri Gu1 U1 Q1 Kdwz dv  
dssuryhg iru r qh uhvghqw iru r qh  
| hdu1 Vkhvh vz r hyhqw z huh vkh  
jhqhvlv ri z kdw z dv w ehfrph  
Surj udp &991 luvz dv qrxwqvo 4<73  
vkdw vkh Odkh| Fdqf/ z kr vh  
rukrsdhglf fkdldp dq z dv Gu1 J1 Q1  
Kdj j huw/ dssdhg iru d ihaz v kls lq  
rukrsdhglf v/ dagg vkh| z huh  
judqvhg r qh ihaz v kls srvlvr q  
adwqj iru d shulg ri r qh w vkuh  
| hdu1

Gxudj vkh 4<73v/ vkh  
rukrsdhglf vhuylfv dw Erwrq Flv  
Krvslvd' EFk, dagg vkh Vkuqhuw  
Krvslvd' z huh lqghshqghq  
surj udp v1 Hdfk krsvlvd' riihug  
wdlqlaj lq rukrsdhglf v/ exw vkhuh  
z dv qr lqvnh udvhg r ujdqj} hg  
surj udp ri rukrsdhglf hgxf dvr q1  
Uhvghqw z runhg yhu1 kdug lq vkh

Df hvr

Uhvghqw z runhg  
yhu1 kdug lq vkh  
4<73v vnlqj f d'v  
yluxdad hyhu qlj kw  
iruz klfk vkh| z huh  
sdg vkh p xqlilfhqwxp  
ri ' 99'33 shup r qv k1

4<73v vnlqj f d'v yluxdad hyhu  
qlj kw iruz klfk vkh| z huh sdg vkh  
p xqlilfhqwxp ri ' 99'33 shu  
p r qv k1 Krz hyhu/ vkhuh z huh p dqj  
fdqglgdvhu iru vkhvh srvlvr qv1 Vklv  
vlv dvr q wdl hg vkh vdp h xqvo 4<7: /  
z khq vkh Erwrq Flv Krsvlvd  
vxgghq d kdg vz r uhvghqw dagg vkh  
Odkh| Fdqf kdg  
irxu uhvghqw ru  
ihaz v z kr vhuylfv  
r qh w vz r | hdu1  
lhaz v frxag wdl  
r qh | hdu z klh  
uhvghqw kdg w wdl  
vz r1 Dw vkh vdp h  
vp h/ Gu1 J1 d'j Krxj k/ Vur/ z kr kdg  
ehfrph Fklhi dw vkh Vkuqhuw  
Krvslvd' wdlvng vnlqj vz r  
uhvghqw iru r qh ru vz r | hdu1 lq  
4<7: / Gu1 Mvhs k Vkrwud' iruz kr p  
vkh suvhqw Erwrq Flv Vkrwud'  
Xqlw lv qdp hg/ ehfrph vkh  
Fkdldp dq ri vkh l udfvkuh dagg  
Rukrsdhglf Vhuylfv dw Erwrq Flv  
Krvslvd' Vkrwud' krwx vkh 4<73v/  
vkhvh vhuylfv dw Erwrq Flv/ vkh  
Vkuqhuw/ dagg dw Odkh| z huh  
lqghshqghqwhgxf vhuylfv/ hdfk riihug  
wdlqlaj lq d sdwlf xadu rukrsdhglf  
glvflsdq/ exw vkhuh z dv qr  
r ujdqj} hg surj udp 1

J hwdvr q wrn d z klh/ exw  
lw dsshdw vkdw Surj udp &99 adv  
ghvlj qdvng el vkh Dp hulfdq Erdug  
ri Rukrsdhglf v Vxuj hu1, z dv  
riilfld' erud lq 4<83 z khq vkh  
Odkh| Fdqf dagg EFk mlqhg vkhlu  
rukrsdhglf surj udp v xqghu vkh  
gxdo dhdghukls ri Gu1 U1 Vxadyd/  
z kr kdg uhsafhg Gu1 Vkrwud' dw  
EFk dagg Gu1 J1 Hgp xqg Kdj j huw  
dw Odkh| 1 Gu1 Vkrwud' d p xfk  
uhvshvng dagg uhyhug vxuj hr q/ kdg  
glhg dq hdu1 ghv k1 Vkh  
rukrsdhglf uhvghqw iurp EFk  
dagg Odkh| vkhq revdlqhg vkhlu  
fklaguhq w wdlqlaj lq rukrsdhglf v  
dw Vkuqhuw Krsvlvd' lq Vsulqj ilhag  
dagg dw vkh P dwdf kxvhuw Krsvlvd'

Vkrro lq Fdqwr q/ z khuh Gu1 Sdxo  
Qruwr q/ vkh lqyhqwu ri vkh Qruwr q  
Eudfh iru vfr dvr l v/ z dv vkh fklhi1  
Gu1 Qruwr q dvr ehfrph r qh ri vkh  
irxu fklhiv z kr phw w vhdvfw vkh  
uhvghqwr1 Surj udp &99 z dv  
irup d' d' dssuryhg el vkh Dp hulfdq  
Erdug ri Rukrsdhglf Vxuj hu1  
+DERV, lq 4<83/ dagg vkh uhvghqf |  
z dv iluw dvhng lq vkh DP D  
Glufvru lq 4<841 E| 4<85/ vkh irxu  
lqvvlvvr qv z huh ixasduw huw lq vkh  
rukrsdhglf hgxf dvr q ri uhvghqw/  
dagg iru uhvvr qv qr w lp p hglvnd  
dssduhqw vkh dgp lqlvwdvlyh khdg  
fdp h iurp Odkh| 1 Lwp d' kdvh ehq  
ehfrph Gu1 Kdj j huw z dv d  
qdvvr q d' nqrz q ilj xuh1 Vkwv/  
Surj udp &99 z dv fdvhng vkh Odkh|  
Fdqf lqvnh udvhg Rukrsdhglf  
Surj udp dagg Gu1 Kdj j huw z dv vkh  
iluw Surj udp Fklhi1 Vkh uhvghqw  
frxag revdlq fklaguhq w wdlqlaj dw  
Vkuqhuw lq Vsulqj ilhag ru dw vkh  
P dwdf kxvhuw Krsvlvd' Vkrro lq  
Fdqwr q1 Vkh fklaguhq w wdlqlaj  
lqlv d' kdg uhvghqw j r lqj w er v  
lqvvlvvr qv1 Odvnu uhvghqw z hqww  
r qh ru vkh r vkhu ri vkrvh krsvlvd'1  
Vkhuh z dv d p dunhg gliihuhqfh lq  
vkh wdlqlaj dw vkh vz r lqvvlvvr qv  
z lvk Vkh P dwdf kxvhuw Krsvlvd'  
Vkrro kdylqj d fdhqvndh vkdwz dv  
adlj h' frp srvhg ri sdvhwq z lvk  
vhyhufkurqlf glvdedaj glvhdvhu1

Gxudj vkh hdu1 4<83v/  
uhvghqw wdlqlaj surj udp v lq  
rukrsdhglf v dv glfvdhng el vkh  
DERV/ lq f' xghg r qh ru vz r | hdu ri  
jhqhudo vxuj hu1 / z klfk frxag eh  
vnlhg dw d' d' d' f' f' u' h' l' v' ng l' q' v' l' v' r' q'  
sox vkuh | hdu ri rukrsdhglf v/  
glylghg lq vlv f' dv ehvz hq Odkh|  
z lvk r qh | hdu ri dgxaw Vkuqhuw ru  
vkh P dw Krsvlvd' Vkrro iru r qh  
| hdu ri shgldvfv/ dagg EFk iru r qh  
| hdu ri wdxp d1 Vkhuh z dv d' d'  
shgldvfv urvvr q dw vkh Odnhyldh  
Krvslvd' z khuh fkurqlf frqglvvr qv  
lq fklaguhq z huh vhdvng 1 Z khvku d

uhvlgqaw z hqaw iru klv wdlqlqj w Vkuqhuw/ Odnhylath/ ruFdqwrq +P dv Krsvlvdv Vfkrro z dv udvkuh gxh w vkh Ôxfn ri vkh gudz /%dagg vklv fuhdvng vrph glvfrug dprqjww uhvlgqaw/ vrph ri z krp suhihuhg vkh Vkuqhuw wdlqlqj z klch rvkuh suhihuhg w wdl qhduhu Erwrq1 Z khq Surjudp &99 z dv iluw ruj dql}hg/ vkh jhqhudo vxujfdo vhuylfh dw EFK z dv lq fkdj h ri iudfvxuh vhdvphqvl Lq 4<85/ Gu1 Vxadydq/ z kr pxw kdyh ehq ghddaj iurp d srvlvrq ri wuhaj vk lq vkh krsvlvdv dvxphg frqwr ori vkh iudfvxuh vhuylfh iru vkh rukrsdhglf ghsdvp hqvl Vklv z dv d prwlp srwldwhyhqwlv vkh klwruj ri Surjudp &99 dagg lq Erwrq1 l udfvxuh fduh kdvdz dlv ehq rqh ri vkh extqlqj eafnv lq rukrsdhglf hgxfdvvrq dagg lv hvhqvldo vr dq dffuhglvng wdlqlqj surjudp lq rukrsdhglf/ exw jhqhudovxuj hul kdg dar frqvlghung lwxkluduhdri h{shuwh1

Dv wdvng suhylrxvd Gu1 Kdj jhuw z dv vkh iluw Surjudp Fklhi1 Gu1 Jhruj h Kdp prqg mlqhg vkh Odkh| Fdqlf lq 4<86 dagg z dv qdp hg fkdulp dq ri vkh Rukrsdhglf Ghsdvp hqwdw Odkh| lq 4<8: 1 Gu1 Kdp prqg kdg wdlqhg dw vkh Xqlyhuwlv ri Plfklj dq dagg iluw z hqaw w vkh Vdluh Fdqlf lq Shqqvl ydqld1 Kh eurxj kw vshf ldo nqrz dngj h ri vkh edfn dagg vkrxaghu/ dagg kh z dv dedv dvlwng el Gu1 Z laddug Grwuh/ z kr kdg dffrpsdq lhg klp iurp vkh Vdluh Fdqlf lq SD1 Gu1 Grwuh sudf vlf hg dw vkh Odkh| Fdqlf dagg z dv dydohg vndf khulq vkh surjudp iru 65 | hduw iurp 4<88 w 4<;: 1

Lwz dv lq 4<89 vkwvkh qdp h ri Gu1 Dch{ dagg hu Dlvnhq dsshdw dv Fkdulp dq ri Rukrsdhglfv dw Erwrq Flwv 1 Gu1 Dlvnhq z dv dar d qdvr qdaj uhfrjql}hg rukrsdhglf vxujhrq z kr fuhdvng vkh Df hvr

fawilfdvvrq ri hslsk| vhdj urz vk lqruhv/ z klfk avhu jdyh eluwk w vkh Vdarhu fawilfdvvrq1 Lq velonv z lvk vrph raghu phpehuw ri vkh Odkh| wdlv/ vkh| wdvng vkwvkh surjudp wdvng z lvk Gu1 Dlvnhq dv vkh suqf lsdoruj dql}hu/ exw vklv dsshdw lqfruhfv l urp grfxp hqaw vkwvL kdyh shvr qdaj vhhq/ DERV dssurydoz dv revdlqhg iru Surjudp &99 lq 4<83/ dagg vkh Uhlvghqf| z dv riilfdaj dvnng lq vkh DP D Gluhfvuj lq 4<841

Wz dugv vkh avh 4<83v/ Gu1 Ulfkdug Nlor| ch ehfdp h yhu lqyrqhg lq uhvghqf| wdlqlqj lq Erwrq/ z khq khz hqwr vkh Fduqh| Krsvlvdv Gu1 Nlor| ch udq vkh Fduqh| dagg vkh vzr fklaguhq x krsvlvdv/ vkh P dv Krsvlvdv Vfkrro dagg Odnhylath Krsvlvdv dkrxjk Gu1 Qruwrq uhp dlqhg vkh vwxadu fklhi dwvkh avhu vzr krsvlvdv1 Gu1 Nlor| ch avhu z hqwrq w hvledvk d vhsdudv/ lqghshqhgqaw surjudp edvhg dwvkh Fduqh| Krsvlvdv xvlqj vkh P dv Krsvlvdv Vfkrro dagg Odnhylath iru klv shglvulf urvvrq dagg ervk vkh Qhz Hqj adag Phglfdo Fhqvhu dagg Erwrq Flwv Krsvlvdv iru dgglvvrqdo wdxp d dagg dgxav Vklv Fduqh| surjudp hyhqv daj phj hg lqwr vkh Vkiw Xqlyhuwlv surjudp lq 4<<3 z khq yluxv daj ddsurjudp v z huh uht xlvng w kdyh d xqlyhuwlv edvh1

Z klch vkh vlxdvvrq dw Odkh| z dv vledh lwz dv qrvvr dw EFK1 Gu1 Dlvnhq/ z kr kdg frph w Erwrq Flwv Krsvlvdv lq klv avhu | hduw/ dhw vkwv srvlvrq lq 4<961 Vkhuh z huh vkhq d vhuhv ri lqvhu l fklhiv dw Flwv Krsvlvdv iru vhyhudo | hduw/ lqfagvlqj Gu1 Duwxu Vklterghdx ri Vkiw Xqlyhuwlv/ Gu1 Urehuw Xhkdhlq ri Ehvk Lvudho

Krsvlvdv dagg Gu1 Sdxo RxEuhq ri Fduqh| Krsvlvdv

Z klch frshudvvrq vkrxag kdyh ehq hvhqvldo w vkh vxffhw ri vkh | rxqj surjudp / lqvnh udvvrq z dv ad{ dagg frpp xqf dvvrq ehvz hqg vkh krsvlvdv fklhiv z dv plqlp do lq Surjudp &99 gxulqj vkh 4<83v dagg \*93v1 Vkhuh z dv yluxv daj qrfurwryhu ri shvrqqhoro vndfklqj / dagg vkh rqqd phhvqlj v vkh| kdg lq frpp r q z huh vkrvh lq z klfk vkh fklhiv phw w fkrrvh uhvlgqaw1 Erwrq Flwv kdg Vdvxugdl prulqj Judag Urxqgv w z klfk ddr ukrsdhglf vxujhrq z huh lqylvng/ exw vkh rqqd shvrq qrvwxv daj dw Erwrq Flwv/ z kr dvnngqhg vkhvh/ z dv Gu1 Chdfk ri vkh Odkh| wdlv1 Gxulqj vkh plg093v lwz dv reylrxv vkwvkh surjudp dw Erwrq Flwv z dv qrvgrlqj z hvd ehfdxv ri vkh avn ri dixavp h dndghu1 lq 4<9:/ Gu1 Fkdudv Zrrgkrxvh ehfdp h vkh Fklhi dw Erwrq Flwv Krsvlvdv dagg z kdvirav z hg vkh qh{ w | hdu dagg d kdofrxag rqqd ehghvdehg dv vxpxavrxv1 Ehfdxv ri uhfxulqj suredp v/ kh z dv dvnng w uhvlj q dagg z dv uhsavfhg iru d shulrg ri

**Gxulqj vkh plg093v lwz dv reylrxv vkwvkh surjudp dw Erwrq Flwv z dv qrvgrlqj z hvd ehfdxv ri vkh avn ri dixavp h dndghu1**

wp h el Gu1 Sdxo RxEuhq/ z kr vh supdul diildvvrq z dv dw Fduqh| 1 Exw Gu1 RxEuhq dz dlv kdg d wvrqj diilqlw wz dugv Erwrq Flwv Krsvlvdv dagg glg klv

ehwvrp dlqvdlq vkh vhuylfh1 lq Vsulqj ilhag lq 4<96/ Gu1 Nlv hv llvku ehfdp h Fklhi dwvkh Vkuqhuw Krsvlvdv vxffhglqj Gu1 Jduj Krxjk/ Vu1 Vkh Odkh| Fdqlf wdlv z dv dxjp hqvnng el vkh dgglvvrq ri Gu1 Z laddp Wvujhuw lq 4<96 dagg lq avh 4<97 el Gu1 Urehuw Chdfk/ z kr fdp h gluhfvj rxwri vkh Qdy| w mlq vkh Fdqlf 1 lq 4<9:/ Gu1 Kdp prqg uhvng dv Fkdulp dq exw wdl hg r q w vndf k

dqg sudf wfh1 Gu1 Chdfk/ z kr wdlqhg dw vkh Xqlyhuwlv ri Plqqhvrval ehiruh jrlqj lqwr vkh Qdy| / z dv dssrlqvhg Fkdlup dq dw Odkh| 1 Lq vkh |hdw 4<8904< 3 vkh uhvghqwr urvdlr qv uhp dlqhg hvvhqvlada| vkh vdp h/ h{fhswwkdwlv vkh plg04<93v vkh urvdlr qv dwvkh Pdw Krsvlvdovfkrrodqg Odnhyladh z huf gursshg/ dqg dæ uhvghqwr z hqw w vkh Vkulqhuw iru vkhlu fklqg uhqwr wdlqlqj 1

Gxulqj 4<9: Gu1 Gdylg Vhj do dqg Gu1 J1 Ulfkdug Sdxori z krp pruh z læ eh z uwhng ævhu/ ehfdp h ihæz uhvghqwr/ dqg vkh| kdyh frqvlqhxg dq dvr fldvr q z lvk Surjudp &99 z klfk kdv ævng lqwr vkh qhz plæhqqixp 1Gxulqj vkh 93v vkh Odkh| Fdqlf z dv nqrz q irulw uhfrqvwxfvlyh vxuj huj z lvk vrp h hp skdvlv rq vkh frqglvrv qv ri vkh vsiqh dqg vkrxæghu/ z lvk Gu1 Kdp prqg ehqj z hæ uhj dughg dv dq dxvkrulv rq frqglvrv qv ri vkh vkrxæghu1 Gu1 Grvhu z dv ghyhæslqj d irrw dqg dqndh sudf wfh1 Gxulqj 4<9909:/ vsruw p hglflqh ehfdp h dq dvshfwri vkh surjudp z khq Gu1 Chdfk ehfdp h vkh ruwksdhglf frqværdqwiru vkh Erwrq Uhg Vr{ dqg vndp grfwu iru vkh surihwlrqdo vrffhu vndp / vkh Erwrq Ehdf r qv1

Lq Qryhp ehu 4<9</ d vlj qliifdqwp hhwaj rffxuwg z khq Gu1 Dæhuw Ihuj xvrq/ M1 vkh Suhvghqwrri vkh Dp hulfdq Erdug ri Ruwksdhglf Vxuj huj / pdgh d vz rgdl lqvshfwrv q ylvwrv Surjudp &991 Ri lqvhuhw/ klv idvku/ Dæhuw Ihuj xvrq/ Vuf/ kdg vhuvhg dv dq dvr fldv Surihvruri lufvuh dqg Ruwksdhglf Vxuj huj dw Erwrq Flv Krsvlvdov gxulqj vkh 4<63v1 Vkh suvhqwr Gu1 Ihuj xvrq/ M1 z hqwr q w ehfrp h vkh Fkdlup dq dqg Surihvruri vkh Xqlyhuwlv ri Slwæxuj k Ruwksdhglf Surjudp 1 Dw vkh frqfævrv ri klv ylvwrv Surjudp

Df hvr

&99/ kh lqirup hg Gu1 Chdfk vkwvkh surjudp frxæg qrw uhp dlq iuh wæqglqj z lvrwxw d xqlyhuwlv diildvrv q1 Kh vdlg vkwvkh Erdug z rxæg qrw dæz vklv lq vkh ixvuh1 Kh sursrvhg w Gu1 Chdfk vkwvkh hlvkhu jr w Vkiw Xqlyhuwlv ru w Erwrq Xqlyhuwlv dqg vkwvkh surjudp xqghu klv suvhqwr dhjlv z rxæg eh wæqvihuvg w vkwv lqvævrv q z lvk Gu1 Chdfk dv vkh Fkdlup dq1 Gu1 Chdfkæ fæwlv uhvsrqvh w vklv z dv/ Ôfdq |rx gr vkwv

Iræz lqj vrp h qhjrvdlrv qv rq Mq 4/ 4< 3/ Gu1 Chdfk dhiw vkh Odkh| Fdqlf dqg ehfdp h vkh Surihvruri Ruwksdhglf Vxuj huj dw Erwrq Xqlyhuwlv Vkrori P hglflqh dqg frqglufwuri vkh lufvuh Vhuylfh dw Erwrq Flv Krsvlvdov z lvk Gu1 Khqj Edqnv/ z kr kdg ehfrp h vkh qhz Fklhi dw Vkiw Xqlyhuwlv 1 Gu1 Zlædp Wfuj hwrq vxffhhghg Gu1 Chdfk dv vkh Fklhi dw vkh Odkh| Fdqf 1 Erwrq Xqlyhuwlv suhylrvd kdg qr dfdghp lf ru uhvghqf| ruwksdhglf surjudp 1 Vkh| glg kdyh vvhudo

sudfvrv qhuw z kr xvhg vkh krsvlvdov dqg z kr udq rqh fdqf/ z klfk z dv vkh h{vngwri vkh p hglfdo vkrro vndfklqj dw vkh vlv h1 Vkh dfvlqj khdg/ Gu1 Mvhsk Nrshæz dv d exvl vxuj hrq z kr glg prwri klv z run dw Ehvk Lvudho Krsvlvdov Gu1 K1 Vdhæudlghv/ z kr glg sulp dud kdaq vxuj huj / kdg d exvl sudf wfh dqg uhp dlqhg iru p dql |hdw1 Lq hduj Mq 4< 3/ Gu1 Fkdvuh Juhj r uj ri vkh DERV ylvvhg XK dqg EFK dqg jdyh dssurydo iru vkh qhz Surjudp &99 edvhg dw Erwrq

Xqlyhuwlv Vkrori P hglflqh1 D uhylh z ri sdwklwrv uhyhdv vkwv gxulqj vkh 4<63v dqg \*73v/ Gu1 Orw Krz dug kdg ehq vkh Khdg ri Ruwksdhglfv dw Erwrq Xqlyhuwlv/ exwrvp hkrz vkh ghsdwp hqwkdg glvdsshuhg1 Krz hyhu/ vkhuh kdg qhyhu ehq d wdlqlqj surjudp ri dqj vrw1

Iræz lqj Gu1 Z rrgkrxvhæ xqæp hqvhg ghsdwxuh iurp Erwrq Flv dqg Gu1 Ræd hqæ hiiruw dw kræglqj vkh surjudp wj hkvhu d wlvxpylvuh duvhg/ Gu1 Khqj Edqnvri Vkiw Xqlyhuwlv >Gu1 Chdfk ri Erwrq Xqlyhuwlv > dqg Gu1 Eduw Txlj dh| iurp vkh Kduydg Vxuj l fdo Vhuylfh1 Gu1 Txlj dh| z dv d J hqhudo Vxuj hrq z lvk dq lqvuhw lq iudf vuvh dqg vsruw lqvuhv1 Vkhvh frqglufwuv uhæxlwkw dw vhuylfh lqwr d vrxqg dfdghp lf surjudp 1 Uhvghqwr iurp EX/ Vkiw/ dqg vkh Fduqh| Krsvlvdovæur vvhng vkrxj k vkh Erwrq Flv Krsvlvdov

Vkrwæ divhu klv dssrlqv hqwdv Fkdlup dq dw Erwrq Xqlyhuwlv dqg frqglufwuv dw Erwrq Flv/ Gu1 Chdfk z dv dz dughg vkh DRD Dp hulfdq/ Eulwv/ Fdqgdldq Wdyhdaj Ihæz vks dqg lq vkh vsulqj dhiw iru vl{ z hhnv1 Vklv z dv srwledh ehfdxvh Gu1 Lvdruh \dearq iurp Prqwhdov Fdqgd/ mlqhg vkh EX idfxæv 1 Vkh ihæz vks hyhqvædæ suryhg w ehrij uhdwydæw vkh surjudp ehfdxvh Gu1

Chdfk z dv lq glufw frqvæfw z lvk vrp h ri klv XVD shhw z kr z rxæg ehfrp h vkh ixvuh dhghw ri Dp hulfdq Ruwksdhglfv/ dqg lwdov surylghg nqrz dhgh ri dqg frqvæfw iurp vkh Eulwv Lvdrv1

Gu1 \dearq/ z kr z dv vdhqlqj ryhu vkh uhqv vkrwvhu / kdg d

sulp dū lqvhuhw lq wdxp d/ sduwfxadu dand iudf vxuh dāg lq edvlf uhvhdufk frqfhuqlaj dūwfxadu fduwādj h ghj hghudv r q1 Dār Gu1 J Ulfkdug Sdxo kdylaj ilqlvkhg klv uhvghaf| ehfdp h d ixæ wlp h wāli p hp ehuz r unlaj dw EFK dāg Xqlyhuwlv Krsvlædo saxv z r unlaj z lvk vkh P dwdfkxvhw Fulssdhg Fklæghqæ Surj udp z lvk Gu1 Dūwkuu Sdssdv ri Fklæghqæ Krsvlædo Gu1 Sdssdv vrrq dhiwvkhuh w ehfrph vkh Fkdulp dā ri Ruwksdhglfv dw vkh qhz Xqlyhuwlv ri P dwdfkxvhw P hglfdo Vkrro lq Z rufhwut Mz lvk P hp rudo Krsvlædo ehfdp h r qh ri vkh EX qrqUhvghqwd diildvhw/ z lvk Gu1 \ deāq ehfrp lqj fklhi vkhuh1 Vsr uw P hglflqh dāg d fdswyh sdwhqw srsxæw r q z dv ixuwku hākdqfhg el vkh dgglw r q ri Quwkhdwuhū Xqlyhuwlv dūwchwf vndp v saxv vkh vndp v dw Ehqvdh| Frājh dāg ævhu r q vkh Erw r q Xqlyhuwlv dūwchwf vndp v1 l xuwku exlæglaj Vsr uw P hglflqh rffxuwg z khq Gu1 Chdfk ehfdp h vkh Erw r q Fhālv r uwrksdhglf frqvxædāw lq 4<9/ d srvlw r q z klfk kh wrn z lvk klp w EX1

Gxulaj vkh | hdu 4< 404< 7/ Surj udp &99 uhp dlqhg wædch1 Fævhu vhw z huh ghyhæshg ehvz hāq XK/ EFK/ dāg Fduqh| Krsvlædo z krvh ruwksdhglf vhuylfh z dv gluhfvng el Gu1 Ulfkdug Nlār| dh1 Fduqh| uhvghqw urvævng dw ervk XK dāg EFK1 Gxulaj vlv shulg vkh ruwksdhglf uhvghaf| wædlqaj frqvlwng ri d r qh | hdu lqvhūqvkl s/ r qh | hdu ri j hghudovxuj hū wædlqaj dāg vkuh | hdu ri ruwksdhglf vxuj hū wædlqaj 1 Vkh lqlwdo v r | hdu frxæg eh vshqw dw dā| dssuryhg krsvlædo ri vkh uhvghqæw fkr lfh1

Lq 4< 7/ vkh flw ri Erw r q ghfhghg vkwir u dgp lqlwædvlyh dāg ilqdāfldo uhdv r qd r qh p hglfdo Df hvr

vkrro zrxæg eh diildvng z lvk Erw r q Flw Krsvlædo Vkh vkuh vkrro lq sæfh z huh dvngh w vxep lwsur sr vdo1 Kduydu P hglfdo Vkrrovhqwd dhwuh edvfdā| wævlaj vkw Ôkh| z huh Kduydu/ Õ dāg vkuhiruh vkh| vkrxæg eh fkrvhq1 Vkiw Xqlyhuwlv vxj j hwng vkwvkh vkuh vkrro v| wnhp z dv z r unlaj z hæ dāg vkrxæg eh dhiw lq sæfh1 Erw r q Xqlyhuwlvæ Ghāq/ Gu1 Hskulp luhgp dā/ suhvghvng d ghvædhg sursr vdo dv w z k| EX vkrxæg eh vkh p hglfdo vkrro ri fkr lfh iru Erw r q Flw Krsvlædo Erw r q Xqlyhuwlv z dv vhdvfvng w gluhfvErw r q Flw Krsvlædo Grfwuw Edānv dāg Txlj dh| kdg w dndyh vkh ruwksdhglf vhuylfh lq vkh kdqg ri Erw r q Xqlyhuwlv1 Gu1 Edānv kdg gr qh d vxshue me ri gluhfvaj vkh vhuylfh/ dāg ehiruh kh dhiw kh fdxvr qhg Gu1 Chdfk vkw Erw r q Xqlyhuwlv z rxæg kdih w ilqg dārvkuh wdxp d vhuylfh ehfdxvh kh ehdyhg vkw Erw r q Flw z dv lq vxfk edg ilqdāfldo vkdsh vkw lw z rxæg vrrq fævh1 Krz hyh/ Erw r q p dlru/ Nhylq Z klv/ ghflghg vkw EFK z rxæg qrwfævh gxulaj klv vngxuh/ dāg EFK wævng d j udgdo exlæglaj surj udp ri vndulaj grz q ræg exlæglaj v dāg uhsæflaj vkh p z lvk qhz r qh/ z klfk kdv frqvlqhxg lq w vkh 54wfhqævū 1 Vkh v r | hdu/ 4< 704< 9/ z huh yhu w xj k lq vnhp v ri vkh qhz surj udp ehfdxvh vkh wāli dw XK dāg EFK z dv vhu r xvq ghsdvhng1

Lq 4< 7/ z lvk p xfk xuj lqj iurp Gu1 \ deāq/ vkh ruwksdhglf ghsdwp hqw riilfhv z huh pryhg iurp vkh ræg Suhw r q Exlæglaj 0 d irup hu Krægd| Lāq iru H{vngghg Fduh Õ w vkh jurxqg iæru ri Xqlyhuwlv Krsvlædo lq vsdfh suhylrxvd rffxslhg el vkh Hp hū hāq| Urrp 1 Vkh vsdfh lqfæghg dfdghp lf riilfhv/ vfhuhvædo vsdfh/ dāg d vp dæ

frqihuhqfh urrp 1 Gu1 \ deāq dāv vdz klv sdwhqw vkuh/ dākrxj k r vkuh wāli p hp ehuz frqvlqhxg w vvh sdwhqw lq vkh Grfwuw Riilfh Exlæglaj 1 Dw vkh vdp h wlp h vkh ghsdwp hqw kdg ehfrph vr exv| vxuj lfdā| vkw lwz dv dærfdvng dā lqsdwhqwr uwrksdhglf iæru dāg v r ixæ wlp h sk| vlfdo vkhudslw z kr z r ungh h{fævlyhā z lvk ruwksdhglf sdwhqwr r q vkw iæru1

Lq 4< 7/ Gu1 Chq Nuxj hu vxffhghg Gu1 llvkuh dv Fklhi ri wāli dwvkh Vkuqhu Krsvlædo z khq Gu1 llvkuh vxiihūg d wævnh/ z klfk uht xlūg klp w uhvuh1 Frqfxuhqvd dāg dv vkh uhvæv ri lqvhuhvāq glvfwlv r qv dāg kdug fruh qh r wdv r qv ehvz hāq Gu1 Chdfk dāg Gu1 Nuxj hu/ Erw r q Xqlyhuwlv ruwksdhglf uhvghqw z huh vhw w Ed| wævnh P hglfdo Fhqvhu lq Vsulaj ilhāg irud vl{ p r qv k urvæv r q lq dgxæw dāg wdxp d1 Vkuh z huh p dnu p lvj lylaj v r q vkh sdw ri vrp h ri vkh EX wāli/ z klfk glg qr w ehdyh vkw vkh Ed| wævnh P hglfdo Fhqvhu urvæv r q z dv d j r r g lghd1 Krz hyh/ z lvk vkh dvr fldw r q ehvz hāq Gu1 Nuxj hu dw Vkuqhu dāg dw Ed| wævnh/ dā d fr p p r gdv r q z dv uhdfkhg1 lqvhuhvāq d/ ryhu vkh | hdu/ Ed| wævnh suryhg w eh d ixlwixæ dgglw r q w vkh surj udp 1 Vkh uhvghqw dffxp ædvng d j uhdv ghdo ri vxuj lfdo h{shuhqfh z lvk vxfk p hā dv Krz dūg Fudz irug dāg Mkq Gh Z hvh dāg z huh h{sr vng w gliihuhqw vkrxj kw dāg vxuj lfdo surfhgxuhv1 Gxulaj vlv wlp h vkh Odkh| urvæv r q uhp dlqhg hvhqvædā vkh vdp h/ z lvk dā hp skdvl r q uhfrqvwæfvlyh vxuj hū 1

Lq 4< 9/ vkh surj udp qhghg qhz hāhū wlv/ dwvnglaj vxuj hr qv dāg khæ dw Erw r q Flw 1 Vkh wlp lqj z dv shuhfv iru d Surj udp &99 j udgædw/ Gu1 Gdylg Vhj dā w uhvæv w Erw r q1 Gu1 Vhj do kdg ehāq z r unlaj lq Lvudho di vhu

ilqlvklaj klv uhvghqf| dagg z dv  
σrnlaq irud vnp srudl srvlvrq lq  
vkh Xqlvng Vvlnv1 Dgydqfhp hqwlq  
vkh Lvudhd Dfdghp lf v|vnp z dv  
qrwulrxvd vāz dagg vkh ehdi z dv  
vkdwk frxag ehvnu klv dfdgph lf  
uhvxp h khuh irud ihz |hdw ehiruh  
uhvxlqaj 1Kh z dv dssrlqvhg Fkthi  
ri vkh Ghsdwp hqwdwEFK z khuh kh  
z dv d vxshue dndghu dagg vndfkhul

Vklv vnp srudl  
srvlvrq advhg qlqh  
|hdw1 Vkh glvqlfvyh  
dndghukls v|dv ri  
Gu1 Chdfk dagg Gu1  
Vhj do irup hg dq  
lqvuhvqlaj frqvadw1Lw  
z dv uxp ruhg vkdwGu1  
Vhj do kdq judgxdvhg  
iurp vkh Ôhvj klv  
Nkdq Vkrro ri  
Glsāp df| Ò dagg Gu1

Chdfk z dv pruh iurp vkh Eulvkw  
Srdvñ Vkrro ri Glsāp df| 1 Vkh  
duudaj hp hq wz dv aduj hq vxfhwixo  
lq vñup vri vklaj v dffrp sdvkhg iru  
Surj udp &991

Vkh 4< 3v z lvqhwng Ò iru  
Erwrq 0 xqvxdo lqvwxvwrqdo  
frrshudvraq ehvz hq vkh vkuh  
Erwrq Ruksrdhglf Surj udp v/ soxv  
d vndg| srvlvlyh ghyhāsp hqwr i  
Surj udp &991 Vkhuh z dv d fāvh  
z runlaj uhādvrvkls z lvk uhj dug w  
uhvghqf| wdlqlaj z lvk Gu1 Khqj  
Edqnv dw Vkiw dagg Gu1 Khqj  
Pdqnlq dw P dwdf kxvhw J hqhudo  
Krvslvdō Erwrq Xqlyhuwlv  
Ruksrdhglfv sduvlsvdhg lq dq  
Ruksrdhglf Sdvkrāj| Frxwh dagg  
d Survkhvfv Frxwh lq Erwrq hdfk  
|hdw1 Gu1 Nuxjhu udq vkh advnu  
frxwh/ z klfk z dv z hāuhj dug h1

Iru EX/ fdqlf do diildvrvq  
z huh ghyhāshg dwrvsdvhwqwf dqlfv  
lq vkh Qhlij kerukrrg Khdōk  
Fhqvnuw lq Hdw Erwrq dagg  
Ur{exu1 Gu1 J hrj h Z klvādz / d  
irup hu uhvghqf z dv khāsixo lq  
rj dql|laj dagg dvhqglaj w vkhvht  
Df hvr

**Vkhruksrdhglf  
ghsdwp hqwsurylghg  
p hglf dof duh iru  
p dql dkdvlf vndp v  
lqfōglaj =Erwrq  
Xqlyhuwlv/ Qrukhadvnuw  
Xqlyhuwlv/ Ehqvñh  
Frāhj h/ dagg hyhqvdō  
^111 vkh Erwrq Fhōlv v/  
^dagg v r surihvraqdo  
vrffhu vndp v1**

Vkh ruksrdhglf ghsdwp hqwr  
surylghg p hglf do fduh iru p dql  
dkdvlf vndp v lqfōglaj Erwrq  
Xqlyhuwlv/ Qrukhadvnuw  
Xqlyhuwlv/ Ehqvñh| Frāhj h/ dagg  
hyhqvdō vkrxj k vkh hiiruw ri Gu1  
Dqvrq| Vfkhsvlv/ d qhz dgglvrq  
w vkh XK wāii/ vkh Xqlyhuwlv ri  
P dwdf kxvhw Erwrq/ soxv vkh  
Erwrq Fhōlv v/ v r surihvraqdo  
vrffhu vndp v/ vkh  
Plqxvnp hq dagg  
Vhd Phq/ dagg vkh  
surihvraqdo vñqqlv  
vndp vkh Erwrq  
Orevnuw1 Gu1 Sdxō  
Chdfk dagg Vfkhsvlv  
vhuvg dv vndp  
sk|vflidqv iru vkh  
Erwrq Euhdhuw ri  
vkh vkruw dyhg XV  
Irrvōdō Chdj xh1

Vkh XV Vhqqlv Fkdp slrqvks  
Wxuqdp hqwr khag |hdw dw vkh  
Orqj z rrg Fulfnhw Foxe j dyh  
|rxaj hu wāii dagg uhvghqwr  
h{srvxuh w vsruw lq d sōdvqwr  
vhwqlaj 1 Rvkuh vsruw p hglflqh  
dgglvrqv/ z klfk kdq wdvuhg lq vkh  
hdw 4< 3v dagg frqvqxhg r q vlv  
z dl iru dssur{lp dvnd 5< |hdw  
lqfōghg urvvrqv iru p hglf do  
vkg hqwr dagg uhvghqwr dwP v|Vqrz  
dagg Vvudvraq P rxqvllq vnl uhvuw lq  
Yhup r qw Vklv dōr diirughg vkh  
wāii dagg uhvghqwr w hqm| z runlaj  
ydfdvrvq1 Gu1 Vhj do rj dql|hg dagg  
gluhfvng vkh ruksrdhglf rxvsdvhwq  
fdqlfv dw Erwrq Flv dagg dōr wrn  
ryhu vkh p hglf do fduh dagg  
uhvuhp hqwr h{dp lqdvrvq iru vkh  
Erwrq Srdfh dagg Erwrq Iuh  
ghsdwp hqwr1

Vkh jurz vk ri vkh  
Ruksrdhglf Wdlqlaj Surj udp dw  
Erwrq Xqlyhuwlv dagg Erwrq Flv  
Krvslvdō lq vkh \*3v dwdfvng  
rxvvdqglaj ruksrdhglf uhvghqwr  
dp r qj w z krp z huh Gu1 J hrj h  
Z klvādz / Gu1 Dqvrq| Vfkhsvlv/

Gu1 Plfkdhō Fruehw dagg Gu1  
Z lōdp Fuhyl dōri z krp wdlqhg  
lq Surj udp &99 dagg z hqwr q w  
vhuvg dv dvhqglaj sk|vflidqv iru  
p dql |hdw1 Gu1 Vfkhsvlv frqvqxhg  
w vhuvg dv vkh Gluhvru ri Vsruw  
P hglflqh lqwr vkh 54wfhqvxu z lvk  
Gu1 Fuhyl dw EFK1 Gu1 Vnshkq  
Z dvlhz vnl dagg Gu1 Ehuqduq Silhihu  
dōr judgxdvhg iurp vkh surj udp lq  
vkh \*3v dagg advnu mlqhg vkh  
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z khuh vkh| frqvlexvhg vj qlilfdqvō  
dv dvhqglaj sk|vflidqv1 Gu1 Sdxō  
frqvqxhg w z run dwer vk krvslvdō  
dagg hyhqvdō wrn ryhu vkh  
dkdvlfv fduh dw Qrukhadvnuw  
Xqlyhuwlv1

Vkhuh z dv d vp dō edlv  
vflhqfh uhvdvfk surj udp dw EX  
gluhfvng e| Gu1\ deāq lq vkh 4< 3v  
z lvk klv sup dū lqvuhvwehlaj lq  
vkh ilhag ri mlqwwdqvsvdqvvrq dagg  
vkh hiifw ri vkh v|qrylxp r q  
fdvvdaj h ghvnuv udvrvq1 Kh uhfvlyhg  
vp dōdp rxqwr ri ixqglaj iurp vkh  
QLK exwgxh w adfn ri ixqgv dagg w  
vrp h{vñqwlip h/ vkh uhvdvfk qhyhu  
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Lq vkh advñ 4< 3v/ vkh DERV  
fk daj hg lw uht xlup hqwr iru  
ruksrdhglf uhvghqwr w r qh |hdw ri  
jhqhudo vxj hū dagg irxu ri  
ruksrdhglfv1 Vkh EX uhvghqwr  
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Xqlyhuwlv Krvslvdō 45 prqkv dw  
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Ed| Vvln P hglf do Fhqvnuv Vkhvh  
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Fhqvnuv z klfk z dv frpsulvhg ri  
EFK dagg XK/ dagg 45 prqkv dw  
Odkh| / vl{ prqkv dwVkulqhu/ dagg  
vl{ prqkv dwvkh Erwrq Yhvudqv  
Dgp lqlvudvraq Krvslvdō Vkh advnu  
z dv p daggdvng e| vkh EX Ghdq/



z klfk unt xlung gursslaj vkh Edl  
Vdvh P hglfdo Fhqvnu iurp vkh  
uhvghqaw urvdvrqv1 Vkh YD kdg  
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w vrp h h{vhwirufhg vkh Ghdaq  
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Lq vkh hduj 4< 3v/ vkh EX  
Rukrsdhglf ghsdup hqw riilfhv  
z huh uarfdvng iurp vkh XK iluw  
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+GRE, r q vkh ; vk isru1 Vklv z dv  
ervk iru vkh fdghp lf riilfhv d qg  
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Vkrwaj divnu vkwgwxh p dlq d w Gu1  
\dearq hiiruw d udgrarj | xqlw  
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Gxulaj vlv shulrg vkh Odkh| Fdqf  
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Vt xduh duhd lq Erwq w Exudaj w q/  
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El vkh 4< 3v vkh Vsruw  
P hglflqh vhwvrq ri Surjudp &99  
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Df hvr

frpsdh{ r q vkh Erwq Xqlyhuwlv  
xqghj udgxvng fdp sxv1 Gu1  
Z l adp Fuhyl mlqhg vkh  
ghsdup hqw durxqg vlv vlp h d qg  
surylghg er vk fdqlf doh{shulwh d qg  
dgp lqlvduvlyh vnlv1 Kh z hqwr q w  
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Fhqvnu1

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h{shulwh h z lvk mlqw uhsaf hp hqv1  
vsruw p hglflqh/ kdaq vxuj hu1 / irrw  
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p d qd j hp hqw gxulaj  
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Iurp 4< 9/  
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vkh r qd frqvawq iurp  
Surjudp &99 vhhp hg w eh fkdaj h1  
Lq 4< 9 Gu1 Vhj dochiwEFK w uhvuw  
w Lvudh z khuh kh uhfhlyhg d  
vlj qlilfdqw Rukrsdhglf  
Fkdlup d qvkl1 Kh z dv uhsaf hg dw  
EFK dv Gluhfru ri Rukrsdhglf  
Vxuj hu1 el Gu1 Jhrj h Z klvatz 1  
Gu1 J 1 Ulfkdug Sdxo frqvaxhg w  
ehqhilwkh surjudp sdulfxadud vkh  
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sulfvfh jrrg rukrsdhglf vxuj l f do

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Rdp slf Frp p lwhh dv Fkdlup d q ri  
Vsr uw P hglflqh d qg Vsr uw Vflhgf h/  
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Lq 4< </ Gu1 Chr q Nuxj hu  
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irup hu1 Surihwrud qg Fkdlup d q dw  
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Fkdlup d q ri vkh Ghsdup hqw dw  
Qhz Rudhqv Fklaguhq Krvslvdo  
Vkh Vkulqhu Krvslvdo z dv ehvaj  
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qhz vwxvuh z dv huhvng1 Z khq  
Gu1 Urehuw uhvuhg iurp Vkulqhu lq  
4<< / kh z dv uhsaf hg el Gu1 Gdylg  
Guyduf z kr kdg ehq vkh vhwvrq lq  
frp p d qg iru p d q | hdu d qg kd v  
surylghg rajrlaj rxvwdqglaj  
dhdghwkl1

Gxulaj vlv vlp h vkhuh z dv  
dj uhdwghdori exlajlaj dw  
vkh Erwq Xqlyhuwlv  
P hglfdo Fdp sxv  
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qhz krvslvdo fdahg vkh  
Dvxp Exlajlaj dw  
Xqlyhuwlv Krvslvdo d qg d  
qhz lqsdvhqwidldv dw Erwq Flv  
Krvslvdo lq 4<<3/ Gu1 Z dlvdz vnl  
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sulfvfh lq Vxq Ydahl / Lgdkr/ d qg  
Gu1 Z l adp Khdd z dv dssrlqvng  
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Odkh| Fdqf > Gu1 Khdd eurxj kw  
derxw vxewdqvdo uhylvd} dvvr q ri  
vkh Odkh| Rukrsdhglf Ghsdup hqv1  
Gxulaj klv vhwvuh vkh Odkh|  
Ghsdup hqwj uhz w ehfrp h d aduj h  
p xatvshf l daj jurxs z lvk vxe0  
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kdv hqkdqf hg vkh fdqfdo vndfklaj ri Surj udp &991E| 4<<</ Odkh| kdq vxevshf lday jurxsv lq mlqw uhsafhp hqw +Gu1 Khdd/ Lrur,/ kdqg vxuj huj +Gu1 P d j d v/ Jxp dh/ Ndvduj dq,/ vsldovxuj huj +Gu1 Silhihu,/ vsruw p hglflqh +Gu1 Zlon/ Chp rv/ Vp l dh|, / ruwksdhglf vwxp d +Gu1 Gxeh,/ dqg irrw dqg dqnd vxuj huj 1

Vkh Odkh| uhvdufk zrun irfxvhg rq vnfkqitxhv ri wvdo mlqw duwkur sady/ vhdv hqwri gliilfxav iudf vxuh/ rxvrp hv vxglhv/ dqg hvdxdv r q ri krsvlvo frw lq ruwksdhglfv1 Vkrw d divnu ehfrp lqj Fkdulp dq dw Odkh|/ Gu1 Khdd z dv vndf vng dv r qh ri vkh iluw Mlsdqhv Ruwksdhglf Dwrflv r q Wdyhdaj ihaz v e| vkh Dp hufdq Dfdghp | ri Ruwksdhglf Vxuj hrqv1 +Vkh fruglqv r q dqg vndf v r q ri NR D ihaz v z dv pryhg iurp vkh DDRV w vkh DRD lq 4<<<1, VKlv z dv dq lpsruv d qw krqr u iru vkh Odkh| Ghsdwp hqwdqg iru Surj udp &991 Vxevht xhqv d lq 4<< / dqr vkh u Odkh| sk| vfl d q/ Gu1 Lrur/ uhfhlyhg vkh NR D Wdyhdaj l h a z v k l s 1

Lq Qryhp ehu 4<<5/ Gu1 Chdfk w ag Ghda Dudp Fkredqldq vkw kh z l v k h g w u h v l j q d v Fkdulp dq1 Vkh Ghda/ krz hyhu/ dvnhg klp w w d l r q z k l d h v d u f k i r u k l v v x f f h w r u z d v e h j x q 1 D q r x w l g h v h d u f k g l g q r w i l q g d v x l v e d h f d q g l g d v n / d q g l q 4 << 7 G u 1 l v d g r u h \ d e a r q z d v q d p h g d v l q v n u l p F k l h i r i v k h R u w k s d h g l f G h s d w p h q w d w E X 1 K h f r q v l q x h g l q v k l v s r v l v r q x q v o P d l 4 << 1 L q v k h p l g 0 4 << 3 v / X q l y h u l v j K r v s l v o d q g E r w r q F l v j K r v s l v o p h u j h g w i r u p V k h E r w r q P h g l f d o F h q v n u / z k l f k z d v v k h i l u w p h u j h u r i d s u y d v n d a g p x q l f i s d o p h g l f d o i d f l d v j l q v k l v d u h d 1 V k h d u d a j h p h q w z r u n h g i d u e h v n u v k d q p d q l s h r s d h k d g s u h g l f v n g d a g D f h v r

frqvqxhg w eh vxffhwixoxqvovkh ilqdqfido z rhv ri Phglfdlg dqg Phglfdh shuwlvng divnu vkh 533; ghedf dh1 Gu1 Z l a d p F u h y | / k d y l a j u h f h l y h g k l v P d w n u r i V f l h q f h l q K h d a k F d u h P d a d j h p h q w e h f d p h v k h F k l h i d w E F K l q 4 << 9 d a g d f v n g d v Y l f h F k d l u p d a g i r u F d q l f d o D i i d l w i r u v k h g h s d w p h q v l Q h z r i i l f h v z h u h d f t x l u n g d w v k h E F K f r p s d h j f r p s d h v l a j v k h p r y h i u r p v k h e d v h p h q w r i v k h V k r u n h o x q l w z k h u h G u 1 E d q n v / T x l j d h | / d a g C h d f k k d g r u l j l a d a j z r u n h g w G u 1 V h j d o x 8 v k i a r u r i i l f h v l q v k h D p e x a d v u j F d u h F h q v n u w v k h s u h v h q w v s d f h r q v k h v h f r a g i a r u r i v k h G r z d a j E x l a g l a j d w E r w r q F l v j K r v s l v o d

Lq vkh plg 4<<3v/ vkh Yhvudqv Dgp lqlwudv r q K r v s l v o l q M p d l f d S a d l q z d v s x w x q g h u v k h d h j l v r i v k h E r w r q X q l y h u l v j P h g l f d o F h q v n u / d a g l w z d v g h v n u p l a h g v k d w v k h r u w k s d h g l f v h u y l f h z r x a g f r p h x q g h u v k h g l u h f w v x s h u y l v r q r i v k h E r w r q X q l y h u l v j g h s d w p h q v l V K l v s u r j u d p k d g s u h y l r x v d e h q x q g h u v k h g l u h f v r q r i V k i w / d a g v k l v f k d a j h r i g l u h f w u k l s k d g e h q g h a l h g i r u v h y h u d o | h d u e x w z d v h y h q w d a j l p s d h p h q v n g e l v k h q h z r u w k s d h g l f f k d l u p d a g d w E r w r q P h g l f d o F h q v n u 1 V k h d i i l d d v r q z l v k v k h Y h v u d q v K r v s l v o q h f h v l v d v n g v k h v n u p l a d v r q r i v k h u h a d v r q v k l s z l v k E d | V a l v n P h g l f d o f h q v n u l q V s u a j i l h a g / z k l f k k d g z r u n h g z h a o i r u 5 3 | h d u 1 G x u l a j v k l v s h u r g / j u d g x d v n v r i S u r j u d p & 9 9 / G u 1 J 1 U l f k d u g S d x o G u 1 D a q v k r q l V f k h s v l v / G u 1 Z l a d p F u h y | / d a g G u 1 W p r v k | l r v n u f r q v l q x h g z r u n l a j d a g s u r y l g l a j d h d g h u k l s i r u v k h u h v l g h q w v n d f k l a j 1

Vkh prw vij qilfdq w ghyhosp hqwlq Surj udp &99 vlfh vkh uhr uj d q l } d v r q l q M d 4 < 3 z d v

vkh dssrlqv hqwri d qhz Surihvr u dqg Fkdulp dq ri vkh Ghsdwp hqwri Ruwksdhglf Vxuj huj dw Erw r q Xqlyhu l v j V f k r r o r i P h g l f l q h l q P d l 4 << 1 G u 1 V k r p d v H l q k r u a f d p h w E X i u r p v k h P r x q w V a d l V f k r r o r i P h g l f l q h l q Q h z \ r u n F l v j d a g d a r q j z l v k k l v f d q l f d o v n l a o / e u r x j k w z l v k k l p d v w r a j e d f n j u r x a g l q e r v k d g p l a l w u d v r q d a g e d v l f v f l h q w l f u h v d u f k 1 Z l v k l q v k h i l u w f d d h a g d u | h d u v k h g h s d w p h q w k d g p d a j s r v l v y h f k d a j h v l a f a g l a j d g h s d w p h q v o s u d f v l f h s a d q / d z h a o i x q g h g e d v l f u h v d u f k s u r j u d p / d a g j u h d v d h { s d a g h g d a g p r g h u a l } h g r i i l f h v r q v k h ; v k i a r u r i v k h G R E 1 R i l q v n u h w w G u 1 H l q k r u a z d v d i r u p h u D p h u f d a / E u l w k / F d a d g l d a W d y h d a j l h a z z / z k l f k p h d a q w k d w e r v k s h u p d a h q w F k d l u p h a r i v k h G h s d w p h q w k d g z r q v k l v k r q r u l Z k h q k h f d p h w E r w r q X q l y h u l v j / G u 1 H l q k r u a z d v d a D w r f l d v n H g l w u r i v k h M i x u a d o r i E r q h d a g M l q w V x u j h u j / d a g k h z d v a d v n u h d f v n g S u h v l g h q w r i v k h R u w k s d h g l f U h v d u f k V r f l h v j 1 L q v k h | h d u v l a f h k l v d s s r l a q v p h q w v k h e d v l f u h v d u f k g l y l v r q k d v u h f h l y h g p d a j p d m u j u d a w i u r p v k h Q L K d a g r v k h u i x a g l a j r u j d a l } d v r q v d a g p x f k d f f a d l p i r u l w z r u n 1 V K l v z d v g x h w v k h g l u h f w h i r u w r i G u 1 H l q k r u a 1

Lq 4< / d q r u w k s d h g l f d e u d j a f d v n g d w v k h E r w r q F l v j K r v s l v o f d p s x v z d v i x a g h g v k u r x j k d g r a d v r q e l v k h C h d f k i d p l d d a g d x j p h q v n g e l f r q v l e x v r q v e l v k h E X R u w k s d h g l f D o x p q l D w r f l d v r q 1 G u 1 J 1 U l f k d u g S d x o k d g i r u v r p h | h d u e h q v k h r u j d a l } l a j i r u f h e h k l a g v k h D o x p q l D w r f l d v r q d a g z d v v k h n h | i l j x u h l q v k l v i x a g l a j h i i r u 1 V K l v p d g h l w s r v l e d h w z h a o w r f n v k h d e u d j 1 L q 4 << / v k u r x j k v k h C h d f k i d p l d / i x a g v z h u h g r a d v n g w h w a l e d v k v k h C h d f k

Ylwlwqj Surihwrwklis dagg Gu1 Fkdudhv Urfnz rrg ri Vdq Dqwrqlr/ Wlf{dv/ ehfdp h vkh iluw jxhww dnf vxuhulq vkhidæori 4<< 1

Dqr vkhup dnu fkdqj hfdp h derxw lq 4<<: z khq Gu1 Hlqkr uq shuxxdghg Gu1 Sdxo Wf uqhwd w frph iurp vkh Qhz \run Flw2Eurndq duhd w dwxp h vkh srvlwr q ri Fkhi dw Erwrq Flw Krvslvdo dagg Ylfh Fkd lup dq iru Dfdghp lf Diidluw1 Gu1 Wf uqhwd dagg klv wælii kdyh uhvuhg vkwkrvslvdo w dsrvlwr q lq wæxp d vlp lædu w ru h{fhhg lqj l w kdd| r q gdl v ri vkh \*3v dagg \*3v1 Kl v hp skdvl r q sdvhwqwf duh dagg dwnqvlwr q w ghvælo ixvkuhu hqkdqf h vkh surj udp 1

Lq ryhu 93 | hdu/ Ru1kr sdhglf Surj udp &99 kdv hyr qyhg iurp vkh vlp h ri d vlqj dh uhvghq w dw Erwrq Flw dagg r qh ihæz dw Odkh| w l w suhvqhwwævxv1 Z kl dh vkh lqf hsvr q ri vkh surj udp fdq eh gdvng w 4<83 dagg vkh Odkh| Fdqlf dagg Erwrq Flw Krvslvdo l w prghuq eluk dv d

Xqlyhuwlv surj udp Ru1kr sdhglf Surj udp ujkvixæj wæduw lq &99 kdv hyr qyhg 4<: 3/ z lvk vkh iurp vkh vlp h ri d dvr fldvr q z lvk vlqj dh uhvghq w dw Erwrq Xqlyhuwlv1 Erwrq Flw dagg r qh W l w suhylvxv ihæz dw Odkh| w l w fdq l f do h{fh hqf h suhvqhwwævxv1 klj kdj kvng e| vkh

Odkh| Fdqlf/ Xqlyhuwlv Krvslvdo dagg vkh Vku l qhuw Krvslvdo vkh qhz Erwrq Xqlyhuwlv Ru1kr sdhglf dndghwklis wæluwqj lq 4<<: kdv eurxj kw dq rxwædqlqj edvlf vflhqf h uhvdufk surj udp dagg vrxqg dgp lqlwævlyh irxqgdvr q1 Wf vklv lv dgghg vkh wvrqj wæxp d surj udp dwEFK dagg vkh frqvæqvæj xsj udghg vndfklqj surj udp dagg sdvhwq w edvh dw vkh Odkh| Fdqlf1 Hd f k ri vkhvh slhf hv dndyhv Surj udp &99 z hæsrvlwr qhg iru vkh ixvuh/ dv Lz ulvh vklv klvr u| lq 53351 Vkh ryhu 463 p hp ehw ri vkh Erwrq

Df hvr

Xqlyhuwlv Ru1kr sdhglf Dexp ql Dvr fldvr q dwnvww l w sdwklvr u| / dagg vkh| kdyh surylghg h{fh hq w jxhww dnf vxuhw iru vkh Dexp ql Wndfklqj Gdl/ d wædglvr q hwædvdvkhg e| Gu1 Hlqkr uq lq 4<<: dagg ævhu qdp hg iru Gu1 J 1 Ul f kdug Sdxæ Surj udp &99 kdv d vr dg sdw dagg lv z hæsrvlwr qhg e| l w dndghwklis iru d eulj kwixvuh1

Vkh OdwGhf dgh E| J 1 Ul f kdug Sdxo

Vkh ævhwghf dgh kdv z l vqhwghg whp hqgr xv jurz v k ri vkh Gh s dwp hq w l q er v k vkh yræp h dagg frpsdh|lv ri vkh vxuj f do surf hgxuhv/ vkh wævxuh ri vkh Gh s dwp hq w dv d Ohyho 4 Wæxp d Fhqvnu/ dagg vkh dndghwklis ur dh ri vkh dwnqglqj wælii p hp ehw l q vkhlu uhvshf vlyh vshf l dæly r u j d q l } dvr qv1 Vkh dwnqglqj wælii/ dæri z kr p duh ihæz v k l s Oædlqhg/ dagg vkh uhvghq w wælii urxv l q h q p dnh suhvqhævvr qv dw uhj l r q do dagg qdvr q do p hhwqj v1 Vkh dwnqglqj wælii l q f æghv Vkr p dv Hlqkr uq +v vdo mlq w d w k u r s æ d w l y , / S d x o W f u q h w æ l +v u k r s d h g l f w æ x p d

uhf r q w æ f v r q , / Elæ Fuhhy| +v s r u w p h g l f l q h d a g g r u k r s d h g l f w æ x p d u h f r q w æ f v r q , / E u l d a g M æ y l d +v v d o m l q w d u k u r s æ d w l y , / [ l q l q j O +v s r u w p h g l f l q h , / W f q l W æ q a r x u j +v s l q h w æ x p d d a g u h f r q w æ f v r q , / F k d g l W æ q a r x u j +v s l q h w æ x p d , / U r e Q l f r d h w æ l +v s r u w p h g l f l q h , / D a g u h z V h l q +k d a g u h f r q w æ f v r q , / D a g u h z M æ z d +k d a g u h f r q w æ f v r q , / d a g G h v p r q g E u r z q +s h g l d w l f r u k r s d h g l f v , 1

Vkh dwnqglqj wælii v ri vkh diildævng kr vslvdo l q vkh uhvghqf |

surj udp +Odkh| Fdqlf P hglf do Fhqvnu/ Vku l qhuw Krvslvdo iru Fklæghq, dnhz lvh duh dæ ihæz v k l s Oædlqhg d a g g d u h d n d g h w l q v k h l u u h v s h f v l y h v s h f l d æ l y r u j d q l } d v r q v 1

Fxuhq w d a g g i r u p h u d w n q g l q j v x u j h r q v l q f æ g h = U r e h u w H 1 O h d f k + i r x a g l q j f k d l u p d a g r i E X G h s d w p h q w r i R u k r s d h g l f V x u j h u j / H g l w u H p h u l v x v r i V k h D p h u l f d a g M x u q d o r i V s r u w P h g l f l q h / W h d v x u h u r i D p h u l f d a g E r d u g r i R u k r s d h g l f V x u j h u j / G h s x v y H g l w u r i F d q l f d o R u k r s d h g l f v d a g U h æ v n g U h v d u f k , / G d y l g V h j d o + i r x a g l q j p h p e h u r i R u k r s d h g l f W æ x p d D w r f l d v r q > F k d l u p d a g / G h s d w p h q w r i R u k r s d h g l f V x u j h u j K d g d w d k P h g l f d o F h q v n u / M l u x v d d p / L v u d h o / V k r p d v H l q k r u q +H g l w u / N E W U h y l f z v > i r u p h u j G h s x v y H g l w u r i N E W , / S d x o W f u q h w æ l +S u h v g h q w / R u k r s d h g l f W æ x p d D w r f l d v r q > h g l w u l d o w æ l i r i M x u q d o r i R u k r s d h g l f W æ x p d , / W p l r w h u +D w r f l d v h H g l w u / D p h u l f d a g M x u q d o r i V s r u w P h g l f l q h / Z l æ d p F u h y | +Y S / E r w r q P h g l f d o F h q v n u 2 F H R E X V P l d f x æ l y S u d f w f h l r x a g d v r q , / d a g Z l æ d p K h d d +F k d l u p d a g H p h u l v x v / G h s d w p h q w r i R u k r s d h g l f V x u j h u j O d k h | F d q l f l r x a g d v r q , 1

l u r p d s u r j u d p v k d w d f f h s v n g r q h u h v g h q w i r u r q h | h d u r i w æ l l q l q j l q 4<83 w d s u r j u d p v k d w d f f h s w i l y h u h v g h q w i r u i l y h | h d u r i w æ l l q l q j l q 5346/ E r w r q X q l y h u w l v G h s d w p h q w r i R u k r s d h g l f V x u j h u j 2 R u k r s d h g l f U h v g h q f | S u r j u d p &99 k d v h y r q y h g l q w d q d v r q d æ j s u r p l q h q w s u r j u d p z k l f k l v w æ l l q l q j v k h i x v u h j h q h u d v r q r i d n d g h w l q r u k r s d h g l f v x u j h u j 1



# Skr w j u d s k l f H v d |

## E h d x w i x o E F K =

D Skr w H v d | r i 4 < v k F h q w u j Y l h z v r i v k h E r v w q F l v j K r v s l v d o

M d p h v V 1 E u x v w P G  
E r v w q X q l y h u l v j V f k r r o r i P h g l f l q h  
F a d v v r i 4 < 9 ;

S h v h u v R v a d q v  
E r v w q X q l y h u l v j V f k r r o r i P h g l f l q h  
P G F d q g l g d v h / F a d v v r i 5 3 4 7

G u l M d p h v V 1 E u x v w l v d s v j f k l d v l w l q s u l y d v h s u d f v f h l q V a q S h g u r / F a d i r u q l d d a g v h y h v d v F k d l u p d a q r i v k h  
G h s d u p h q w r i S v j f k l d v l d a q g P h g l f d o G l u h f w u r i v k h S v j f k l d v l f X q l v d w S u r y l g h q f h Q w a h F r p s d a j r i P d j  
P h g l f d o F h q v h u l q V a q S h g u r 1 K h l v d a r D w l w a q w F d a l f d o S u r i h w r u r i S v j f k l d v l d w k h G d y l g J h i h q V f k r r o r i  
P h g l f l q h d w X F O D / d a g v a d f k h v s v j f k l d v l f u h l g h q w d w k h K d u e r u X F O D P h g l f d o F h q v h u l

L a d g g l v r q w i x a v l p h s u d f v f h / G u l E u x v w l v d a q l a g h s h a g h q w k l w r u d a q / v s h f l d o j l a j l a 4 < v k f h q w u j s r s x a d u s u l q w  
d a g s k r w j u d s k v r f f d m r q d a j f u r w l a j r y h u l q w p h g l f d o v s l f v l a f a g l a j P d j Q a f r a e 1 K h k d v z u w h r q r y h u  
i r u l y m x u d o d u l f d v / v h y h u b e r r n f k d s v h u / d a g l v d f r a d v k r u r i v k h e r r n Z k h u F x w h u l h a e S k r w j u d s k v r i  
v k h Q w a h E l j k r u q E d w a h i l h a g V k h q d a g Q r z - X q l y h u l v j r i R n a k r p d S u h w / 5 3 3 8 , 1 M a f h 4 < < 8 / G u l E u x v w  
k a d e h q d f t x l u a j d a g g r a d m a j k l w r u f d o d u l f d v h a e m a j w E X V P d a g v k h E r v w q F l v j K r v s l v d o



q h l a g h j r i v k h  
l a q w a j h a f h d a g  
s x e d f v s l u w r i d  
f r p p x q l v j l v v k h  
z d j l a z k l f k l w s u r y l g h v i r u v k h q h g v  
r i v k h v l f n d a g s r r u l E r v w q / l a  
h w a d e v k l a j d a g p d l q v a l q l a j d  
P x q l f l s d o K r v s l v d o ' E ' k a d j l y h q  
s u r r i r i d k x p d a l v a l u d a q v s l u w d a g d  
f l y l f l a q w a j h a f h v h f r a g w q r f l v j l a  
v k h X q l v n g V a d v h / O v a l g h d u j E F K  
v x s h u l q v h g h q w h r u j h U r z h / P G 1 l a  
d g g l v r q w l w v j p e r e d f y d o x w v k h  
f r p p x q l v j / d a g v k h j r r g p h g l f d o  
f d u h s u r y l g h g v k h u / v k h r u l j l a d o  
E r v w q F l v j K r v s l v d o z d v d e h d x v i x o

f r p s d a j 1 H u h f v n g l a 4 ; 9 7 / n a w d v  
s r s x a d u j s u l f h g s k r w j u d s k v z h u h  
e h f r p l a j z l g h d d y d l a e d v /  
s k r w j u d s k h v p d g h d a g v r a e p d a j  
l p d j h v r i E F K l a l w h d u j | h d u /  
z k l f k z d v d p d u n r i f l y l f s u g h r q v k h  
s d u r i v k r v h z k r s x u f k a d v n g v k h v h  
s l f w x u h v 1  
V k l v d u l f d h s u h v h q w d j u r x s r i 4 < v k  
f h q w u j s k r w j u d s k v r i v k h E r v w q  
F l v j K r v s l v d o P r w w d u h v h u h r j u d s k v  
- d a r n a r z q d v v h u h r y l h z v ; > g r x e d h  
l p d j h v p r x q v n g r a d f d u g / p d g h e l d  
f d p h u d z l v k v z r d h q v h v v s d f h g v k h  
v a p h g l w a l f a f h d s d u w d v k x p d a h l h v 1  
Z k h q v h q v k u r x j k d v s h f l d o y l h z h /

v k h j d y h d v k u h g l p h q v r q d o h i i h f w  
y h j z h a v x l v n g i r u v f h a l f / a d g v f d s h /  
d a g d u f k l v f v x u d o s k r w j u d s k v 1  
V k r x j k v r p h k l w r u l f d o l q i r u p d v r q  
l v l a f a g h g l a v k h f d s v r q v / v k l v d u l f d h  
l v l a q r z d j p h d a w w e h d  
f r p s u h k h a v l y h d f f r x q w r i v k h  
k r v s l v d o v h d u j | h d u / e x w u d v k h u d a q  
d h v k h v l f a r n e d f n d v d s x e d f e x l a g l a j  
f r p s d a j v k d v z d v d e h d x v i x o d v l v z d v  
k h a s i x o d a g l p s r u d a q v 1  
D a e l a x v a d v r q v l a v k l v d u l f d h d u h  
i u r p v k h f r a h f v r q r i v k h E r v w q  
X q l y h u l v j P h g l f d o F h q v h u D o x p q l  
P h g l f d o Q e u d j / g r a d v n g e l d x v k r u  
M d p h v E u x v w

I lj xuh 4=Dqr q| p rxv #h1qr skr wj udkhu lghqwilhg, wnhur j udk/ vz r dæxp hq vlo/hu sulqw/ hdk 6 { 6 lqfkhv/ p rxqvhg r q d 6 62; { : lqf k fdug +df vx do vl}h vkr z q,1Wklv lv vkh vj slf do ds shduqf h ri d 4<vk fhqvu| wnhur ylh z 1Lq vxvht xhqwlæxwudvr qv z h kdyh vkr z q r qd r qh vlg h ri vkh wnhur j udk/ r i vnhqvp hv hqædj hg w p dnh vkh lp dj h ghvælo p r uh f ddu +vhh I lj xuh 5 ir udq hqædj hp hqwr i vklv ylh z ,1

I lj xuh 5=Hqædj hg ghvælo ri I lj xuh 41Wklv lv dq hduq ylh z / dnhq vènhq lq vkh 4; 93v1Lwvkr z v vkh vkuh p r wv sur p lqhqr i vkh r uj lqdoexlæglqj v1Lq vkh fhqvu lv vkh p dj qilf hqwDgp lqlwudvr q Exlæglqj z lvk væof r æp qv dqg wævhq grp h/lw dsh{ ulvqj w d khj kwri 47; ihhv1'5` Rq vkh dhiwlv Sdyldr q L/ vkh vxuj lf dosdyldr q z lvk z dugv D/ E/ F/ dqg G1Rq vkh uj kwSdyldr q LLkr xvhg p hglf doz dugv H/ I / J / dqg K1Er vkh z huh fr qqhf vng w vkh Dgp lqlwudvr q Exlæglqj el d fxuyhg/ fryhuhg fr æqqdgh1Wkr xj k qr wfxuuhqvæ p dnhg z lvk lqvhusuhvlyh vij qdj h der xwvkhlu r uj lq/ vkh vz r Sdyldr qv wæwædq wgd| / qr z qdp hg EFG +dhw dqg I J K +ulj kw divnu vkh z dugv vkh| r qfh fr qvælhqg +vhh I lj xuh 47,1Wkh r vkh r uj lqdo exlæglqj z dv d er ldu kr xv h gluhf væ ehklqg vkh Dgp lqlwudvr q Exlæglqj / khqfh qr wylvæd lq vklv skr wj udk1Wkh exlæglqj vhhq lq vkh glwæqfh ehklqg vkh uj kwfr æqqdgh lv sur edeq Sdyldr q LLL/ exlowvz r | hdw ævhu +der xw4; 99, w kr xv h vhs w f f dvhv uht xlulqj lvr ævtr q1Lq vkh ir uhj ur xqg lv Kduvtr q Dyhqxh/ dwkh vlp h d gluwwvnhv1Wkh ehdxv r i vkh duf klvæf vxuh dqg æd| r xwr i vkhvh exlæglqj v lv hylghqvæ

I lj xuh 6=VKlv p ds ri EFK dgg vkh dgrdf hqwdud e| J P 1K r snlqv) Fr 1j lyhv d ehvnu ylhz ri vkh uhvdyh af dvr qv ri vkh exlq lqj vkrz q lq l lj xuhv 4) 5/z klfk ir up d Ô Övkds hg fr qilj xudvr q lq vkh duhd p dunhg Ô Flv Kr vs lvd Ô Vkh sur qj v ri vkh Ô Öduh Sdyldr qv L+lj kw dgg LL+chi w udf klqj xs w z dug K duvr q Dyhqxh/ z klfk daj dhv df ur w vkh w s ri vkh p ds 1Vkh az hu vhf vr qv ri vkh sur qj v duh vkh fxuyhg/ fr yuhg fr az qdghv/ z klfk vkh q fr qdghv w vkh dgp lqlwudvr q exlq lqj lq vkh fhqvnu/ lw grp h uhsuhvq vng e| d fluf dh 1Vkh az hu vhf vr q ri vkh Ô Öj r hv wudlj kw grz q w vkh erldu kr xv vkw d iur qw r q Dædq| Vuhhv Sdyldr q LLlv vkh riivkr r wexlq lqj w vkh chiwri vkh edv ri vkh Ô ÖVkr xj k s xedvkhg lq 4; : 7/ vklv p ds p xwkd y ehq p dgh d | hdu r up r uh hduhu/ dv lwwvævkr z v vkh Qhz Hqj ædg l hp dh P hglf do Fr æhj h w vkh l j kw ri vkh Flv Kr vs lvd oj ur xqgv/ hyhq vkr xj k l wkdg ehf r p h vkh Er w r q Xqlyhu w Vkr r ori P hglf lqh vkh | hdu ehir uh 1Exwklv z dv ehir uh vkh p dmuf kdaj hv w EFK r xwæqhg lq l lj xuh; 043 ehaz 1

I lj xuh 7=VKlv hdyd vng fævh xs ri vkh grp hg Dgp lqlwudvr q Exlq lqj / sur edeq vnhq iur p Sdyldr q L j lyhv d ehvnu ylhz ri lw duf klvrf vudo ghvælv 1 Vkh erldu kr xv z lvk lw vp rnhwæfn/ gluhvæ ehklqg vkh grp hg wæxfvæuh/ lv ylvæd iur p vklv daj dh1

I lj xuh 8=D j ur xqg dnyhofσvhs ri vkh grp hg  
Dgp lqlwudvr q Exlqglqj dgg vkh fxuyhg sdvk  
dhdglqj w lvd Xqdnh p r wdufklvxfwudoylh v ri  
vkdwhud/ vklv r qh fr qvdlqv shrsdh1Rq vkh uj kwd  
z r p dq lq d σqj guhv ri vkwshulrg dssurdfkhv  
dσqj vkh sdvk/ z klh lq vkh edfnj ur xqg d p dq  
vhw r q vkh exwvhw r q vkh dhiwvlgh ri vkh z lgh  
wvqh wdluz dl 1Vkh| j lyh vfdh w vkh lp dj h/ exw  
dovr uhp lqg xv vkwvklv kr vslvbz dv d salfh vkw  
fdhg ir ush r dh1

I lj xuh 9=Dqr vkhu uhdvwhq hduq ylh / vklv r qh  
vnhq r q dq daj dh vkwvkrz v p r wri Sdyldr q Lexw  
r qd vkh iurqw fr uqhu ri Sdyldr q LL1 lq vkh  
ir uhj ur xqg/ fr edhwr qhv kdyh uhsalfhg vkh salfq  
gluwvhq dσqj Kduv r q Dyhqxh lq I lj xuh 4 dqg 51

I lj xuh :=Dq xqvxdo ylh vnhq iurp ehklqg  
vkh Dgp lqlwudvr q Exlqglqj / σ rnlqj wz dug  
Kduv r q Dyhqxh1Vkh fxuyhg fr σ qdghv dhdg w  
vkh edfnv ri Sdyldr qv Ldqg LL1Rq vkh idu dhiw vkh  
iurqw fr uqhu ri vkh vndp kr xv h lv nwweduhq  
vnhq1Dqg vkr xj k lwgr hvq vkrz z hdlq vklv  
vf dq/ z kdwdsshduw w eh d yhj hvledh j dug hq ilaw  
vkh vsdfh w vkh uj kwri vkh grp hg exlqglqj 1Dw  
vkh idu uj kw vkh Fkxufk ri vkh lp p dfxavh  
Fr qfhs vlr q/ z klfk vkwvdlqgv/ lv vnhq1Lw fr uqhu  
wvqh z dv d lq 4; 8</ vkvxvshgdvqj EFK 1

I lj xuh ; =Vklv lv dq lp sr uwlqwwdqvlvr qdo  
ylhz 1Rq vkh uj kw vkh fryhuhg fr σ qdqgh  
qrz uxqv rqq d vkruw glwldqfh ehiruh  
p hhwldqj d qhz exlglqj / lw fr qwwxfvr q  
vf diir ogv vwlolq saf h1Vkh vdp h vf diir glqj  
lv dvr vhhq r q vkh dhw vkr xj k vkh df vdo  
qhz exlglqj r q vkwvlgh lv rxwlg h vkh  
ilhq ri ylhz ri vklvskrwj udk1

Ryhu vkh kr vsldov iluwghf dgh/ vkh sr sxdlvr q ri vkh flv j uhz / dqg vkh ghp dqg ir u ehgv lqf undvhg1Lq 4; : 7/ vkh  
vwxvnhv dqg p hglf do wdi fr qylqfhg vkh Flv Frxqflow dssur suldv ixqgv w hqdlj h vkh p hglf do dqg vxuj lf do  
z dugv1Vklv z dv dfr p sdvkhg e| fr qwwxfvqj vz r qhz exlglqj v ehvz hhq vkh h{lvldqj Sdyldr qv Ldqg LLdqg vkh  
Dgp lqlwddvr q Exlglqj r q hlvkhu vlgh1Vkh fryhuhg fr σ qdqghv z hu vkrxv vkr uwhqhg r q er vk vlghv dv vkhvh qhz  
exlglqj vilahg p r wri vkh vsdf h vkh| kdgr ffxslhg1

I lj xuh <=Vklv p ds sxedvkhg e| J Z 1 Eur p dh| ) Fr 1lq 4; ;6 vkrz v vkh unadlyh sr vlvr qlqj ri vkh vz r qhz  
exlglqj v ehvz hhq vkh r uj lqdosdyldr qv dqg vkh Dgp lqlwddvr q Exlglqj 1Dv lq I lj xuh 6/ Kduulvr q Dyhqxh dqj dhv  
dfurw vkh ws ri vkh p ds 1Vkh z rugv ÔFlv Kr vsldvãduh sulqvhg uj kwvkrxj k vkh vz r qhz exlglqj v dqg vkh  
grp hg Dgp lqlwddvr q Exlglqj 1



I lj xuh 43=Vklv lv shukdsv vkh ehww4<vk fhqvxuj ylhz ri vkh Erwrq Flw Krvsldd sduw ehfdxvh vkh rujlqdolvd  
aduj huirup dwvtqj dh7{ 9lqfk skr wj udsz klfkj lyhvj uhdvughvalovkdq d6{ 6vnuhr kd61Vkh vz r qhz exlqqlqj v  
kdyh ehhq fr p schvg1Luz dv vdlg Qkh| kdg vkh vdp hj hqhudowj dh dv vkh vz r r ghusdyl dr qv/Ä `dqg fduh z dv vdhq  
w salf h vkhp dj uhdedq lq uadwr q w vkh Dgp lqlwudwr q Exlqqlqj 10^6 Vkh uhvawz dv d fdufxwdhvkhwf vxfhw1  
Vklv iurqw id•dgh ylhz ri vkh Erwrq Flw Krvsldd vdhq dfurw Kdulvr q Dyhqxh iurp vkh hqwudqfh w Z r uf hvhu  
Vt xduh vhh vkh fr uqhu vnf wr qv ri sdyhp hqwlq vkh iruhj urxqg r q hlvkhu vlgh, lqvsuhg qxp hur xv haj udylqj v vkdw  
ds shduhg lq er r nv dqg shulr glf d6/ glwbp lqdWqj vklv lp dj h w dp xfk z lghudxglhqfh vhh I lj xuhv 44 dqg 45,1

I lj xuhv 44 ) 45= Vž r haj udylqj v ri vkh  
iurqw id•dgh ylhz ri vkh Erwrq Flw  
Krvsldd vkh w s r qh iurp Nlqj w Kdqgerrn  
ri Erwrq/ ^7 vkh r vkh iurp D Klwuj ri vkh  
Erwrq Flw Krvsldd ^8 Edvhg r q  
skr wj udskv dnh vkh r qh lq I lj xuh 43/ vklv  
ehfdp h vkh vj qdvwuh ylhz ri EFK1Lq vkh  
hud ehir uh derxw4; <3/ z khq skr wj udskv  
frxqg qrweh gluhf vq uhsurgxfhg r q vkh  
sulqvhg sdj h/ haj udylqj v vxfk dv vkhvh lq  
er r nv dqg shulr glf d6 eurxj kwvklv lp dj h  
w dz lghudxglhqfh1

I lj xuh 46= Vkh Erwrq Flv Krsvlvdohf dph dq  
dufklvfvxudo adqgp dun iru vkh hqvluh Vr xvk Hqg1  
Vkh vxerhf w ri vklv skrwrj udsK lv Z ruf hvhu  
Vt xduh/ vlnhq iurp vkh Z dvlqj wq Vvnhwvlgh1Exw  
vkh p rwwqr vlf hdedh wuxfvxuh lv vkh grp hg EFK  
Dgp lqlwudvlyh Exlqglqj dfur w Kduulvrq Dyhqxh  
lq vkh edf nj ur xqg1

I lj xuh 47=P rghuq frp sduvrq skrwrq  
vkh erwrp / vlnhq el dxvkr u Mlp hv Euxww  
lq 53461 Vkh ylhZ lv dfur w Kduulvrq  
Dyhxh iurp vkh hqwdqfh w Z ruf hvhu  
Vt xduh1 Vkh grp hg Dgp lqlwudvlyh q  
Exlqglqj z dv uhp ryhg lq vkh 4<63v/ vkh  
dgglvwr qdo p hglfdo dqg vxuj l fdo  
exlqglqj v dgghg lq vkh 4; :3v duh qr  
σ qj hu suvhqvw dqg qr wdfh uhp dlqv ri  
vkh fryhuhg fr σ qdghv1Exwvkh r ulj lqdo  
Sdyldr qv Ldqg LL wlvwvldqg/ qr z qdp hg  
EFG rhiw dqg I J K r ulj kw1Vkr vh dhwvhu  
z huh vkh qdp hv ri z dugv lq vkr vh  
exlqglqj v1 Vkhvh z huh vkh iluwv vz r  
Erwrq Flv Krsvlvdohf wuxfvxuhv xvhg iru  
sdvnhqwf duh z khq EFK rshqhg lq 4; 971  
Vkdqnxad vkh| wlvwvldqg wvkh| rxj kw  
w eh suvhuyhg/ p dunhg/ dqg  
uhp hp ehuhg1



Qr vlv=  
^4` FkhhyhuGZ / J d| J Z / P dvr q DO/  
Eadh NE/ hg v1D Klwruj ri vkh Erwrq Flv  
Krvslvdohf l urp Lw l rxqgdvwrq Xqvlw4<371  
Erwrq=P xqf l sdo Sulqvlqj Riilfh>4<391  
Scj h 41  
Df hvr

^5` Lelg/; 1  
^6` Lelg1 440451  
^7` Nlqj P 1Nlqj w Kdqgerrnri Erwrq/  
Surixvhd Laxwudvlyh1Erwrq=P r hv Nlqj  
Sxedvkhv>4; ; 1Sdj h r ss 153; 1

Vklv errn z dvhqrup rxvdj sr sxadu/ dqg  
uhlvxhg r q d| hduj edlvir uryhud  
ghf dgh/ z lvk vklv ylhZ ri vkh Erwrq  
Flv Krsvlvdohf hdk sulqvlqj 1  
^8` Fkhhyhu/ iurqvlwslhf h1

# Rq Fdp sxv

## Slf vx uhv ri Edelhv=

P dvvdf kx vhw P hp r uldo Kr vs lvdor\* Rx wuhdf k w  
Vhuylf hp hq lq Z Z LL

D\*Qd q HwWhq/ P QLV  
Khdg ri Whf kqlf do Vhuylf hv  
Er vw q Xqlyhuwlv Dax p ql P hglf do Qeudul



qlp suhwlyh dw iluw  
σrn/ rqh sādla  
p dqlad ir aghu lq vkh  
P hglf do Qeudul  
Dufklyhv fr qvdlqv  
z kdwp xweh dp r qj

vkh p r w lqvuhwlvqj klw ulf do  
fr aθfr vlr qv r q vkh Er w r q Xqlyhuwlv  
P hglf do Fdp sxv1 Odehdg  
Ôhuylf hp hqv x uhsdhv  
df nqr z dhg j lqj slf vx uhv ri edelhv  
4<76078Ô vkh ir aghu fr qvdlqv 496  
dhw h w / vshg ru kdqgz ulw h q / r q  
| h a z lqj sdshu udaj lqj iur p  
luh j x adud vk dshg vk h w w  
w d w h r q d u j z l v k v k h l p s u l q w r i  
r u j d a j } d w r q v d n h v k h X q l v n g V w d h v  
Q d y | / v k h D p h u f d q U h g F u r w / d a g  
p d q l r v k h u 1 D v v k h a d e h o w d h v /  
v k h v h d w h u v h { s u h v v k h  
d s s u h f l d w r q r i v h u y l f h p h q l q v k h  
X 1 M 1 p l d v d u j z k r u h f h y h g  
s k r w j u d s k v r i v k h l u q h z e r u q  
e d e l h v / d a g v k h | f r p h i u r p d v q h d u  
d v G r u f k h w h u / r u d v i d u d z d l d v  
l q g l d / F k l q d / H a j a d a g / v k h  
S k l d s s l q h v / d a g Ô r p h z k h u h d w  
v h d Ô

Vkh dhw h w d u h k h a g l q v k h  
d u f k l y h g u h f r u g v r i v k h  
P d v d f k x v h w w P h p r u l d o K r v s l v d o r  
D f h v r

+P P K, / EXVP x diildvng kr vs lvd o  
gxulqj vkh z du | h d u 1 V k d w  
u h a d w r q v k l s k d v f r q v l q x h g v k u r x j k  
v h y h u d o q d p h f k d a j h v w X q l y h u w l v  
K r v s l v d o EX P h g l f d o F h q v h u  
K r v s l v d o d a g i l q d a d / d i v h u v k h  
p h u j h u z l v k E r w r q F l v K r v s l v d o  
w E r w r q P h g l f d o F h q v h u / w g d l /  
p d n l q j v k l v f r a θ f r v r q s d u w r i n a w w  
r q h f k d s v h u l q v k h f r p s d h { k l w u j  
r i v k h EX P h g l f d o F d p s x v 1

Vshf l i l f f r q v h { w l v  
x q i r u x q d v h d v f d a v l / z l v k q r v k l a j  
l q v k h D u f k l y h v h { f h s w v k h a d e h d g  
i r a g h u d a g v k h d w h u v v k h p v h g y h v 1  
Z h f d a q v h v k d w v k h P P K K r v s l v d o  
D l g D w r f l d w r q d u d a j h g w v h a g d  
s k r w j u d s k r i d p r v k h u d a g k h u  
q h z e r u q w v k h g h s a | h g i d v k h u  
z k h q h y h u d v h u y l f h p d a x z l i h  
g h d y h u h g d e d e l d w k k k r v s l v d o e x w  
k r z p d a j v x f k e d e l h v z h u h e r u q /  
v k h r s h u d w r q d o g d h v / f r w w d a g  
r u j d a j } d w r q r i v k h s u r j u d p / d a g  
r v k h u l q i r u p d w r q l v x q f d h u f V l w d  
l w w s r v l e d h w j d v k h u s d a q v r i  
i d v l q d v l q j g h v d o 1

Rqh l p d j l q h v l w p x w k d y h  
e h q d v d w i | l a j v a l n i r u v k h s h u r q  
u h v s r q v l e d h i r u v l s l a j d d w h u d a g  
v h a g l a j v k h s k r w j u d s k r q l w

m x u q h | = d a r s s r u x q l v w j l y h  
j r r g q h z v d a g m l w v r p h r q h z k r  
p l j k w e h d w x p h g w k d y h v s h f l d o  
q h h g r i l w l M a g j l a j i u r p v k h  
u h v s r q v h v / v k l v v h u y l f h z d v r i v n q  
x q h { s h f v n g 1 V k h s k r w v z h u h  
u h f h y h g / l q v k h z r u g v r i v z r  
z u l v h u / d v d Ô p r w w z h a f r p h g  
v x u s u l v h / Ô d a g d a l g h d Ô p r w w q r y h o  
d a g k l j k d d s s u h f l d v n g Ô

Lq u h w r v s h f w d s k r w r i k l v  
q h z e d e l p d l v h p d a r e y l r x v  
z d l w e u j k v n q d v h u y l f h p d a x g d l 1  
\ h w v k h d e r y h f r p p h a w / d a q j  
z l v k d a r v k h u v r a g l h u x w w d h p h a w  
v k d w Ô l w r q h r i v k h e h w w k l a j v L y h  
k h d u g r i v l a f h L y h e h q l q v k h  
v h u y l f h / Ô v x j j h w v k d w q r w h y h u j  
k r v s l v d o k d g d a g D l g D w r f l d w r q  
d e d h w s u r y l g h v k l v h a f r x u d j h p h a v l  
L q i d f w v k l v p d l k d y h e h q d v s h f l d o  
e h q h i l w w g h d y h u l a j d w P P K 1 V k h  
s u r j u d p / r q h p d a z u l v h v / Ô v d y h u j  
v k r x j k w x o d a g v s d a g g l g h d / d a g l i  
r v k h u k r v s l v d o A E ` r a q d n a h z r i  
v k h m l d a g k d s s l q h w u h f h y h g A E `  
L p v x u h v k h | z r x a g d a r d g r s w  
v x f k d y h u j i l q h s r d f j Ô

Xqir u x q d v h d / q r q h r i v k h  
s k r w j u d s k v d u h d u f k l y h g / e x w z h  
g r k d y h d a g h { d p s d h r i v k h q r v h v k d w





df fr p sdq lhg vkhp 1D eulhi/ p dwnu0  
ri0df w wv dwp hq w lwj lyhv vkh g dvn  
daq vlp h ri eluw/ vkh fklag w v h  
daq z hlj kw d qg vd| v/ vlp sd/  
ÔNklqlaj lw z rxag dgg w |rxu  
kdsslqhw w kdyh d slf vxuh ri |rxu  
qhz vrq ^ru gdxj kvnu/ d  
skrwj udk lv hqf a vhg 10

Vkh slf vxuh z huh qr w  
daz dl v xqh{shf vng=z rp hq/ dz duh  
ri vkh skrwj udk d qg lw sxusrvh/  
p dl kdyh p hqvr qhg lw w vkhlu  
kxvedqgv lq vkh lurz q dwnu/ d qg lw  
p xwvr p hwp hv kdyh ehq d p dwnu  
ri z klfk hqyh s h duhyg iluw Rqh  
vr q lhu vd| v/ Ô z dv w ag vkdw |rx  
z huh vhg lqj p h d slf vxuh ri p |  
z lih d qg edel d qg L y h ehq  
z dlwaj sdv h qv d hyhu v lqfh 10 K h  
j r h v r q w vd| / Ô Exwp dl L dgg lw  
z dv f huw l q d z r uk z dlwaj ir u 10

Rqh dwnu revhuyhv vkdw vkh  
skrw z dv v dnhq el Ere Nhdu/  
z krp vkh z ulvnu nqhz dv vrp hrqh  
Ôdfvlyh z lvk vkh Xqlvng Z du l xqg  
ir u p d q l | hdu 10 Qr lqir up dvr q  
derxw P ut Nhdu lv dufklyhg/ exw  
vklv vxj j h w kh z dv vkh  
skrwj udk hu w ru r qh ri p xal s h  
skrwj udk hu w / uhv l qhg el vkh Dl g  
Dwr fldvr q w ylv w kh kr vslv od qg  
v dnh vkh slf vxuh 1 Vklv p xw k dyh  
ehq v d w i | l a j z r u n / n q r z l a j v k d w  
vkh skrw z rxag eh z h r p h g el  
idu 1 i i d v k h u / k h o s l a j w d v x u h  
vkh p ri vkh vxew l q f h d qg u h d d v | r i  
d f k l a g v k h | p l j k w q r w v h h i r u  
p r q v k v 1 D v r q h p d q z u r v n / Ô w z d v  
g r x e d u h d w x u l a j w p h d i v n u p |  
a q j z d l w w v h h v k d w k h z d v z h o l q  
d g g l v r q w k h d u l a j l v 10

Rvkh w ghv f u l e h v k h s l f v x u h  
d v Ô k h p r w v k r x j k v x a w ^ m f ` j l i w  
v k d w L k d y h u h f h y h g i u r p d q l  
v r f l h v y ^ E ` g x u l a j p | d u p |  
f d u h u 10 d q g Ô k h e h w j l i w L k d y h  
h y h u j r w h q 10 P d q l z u l v n u d o r  
p h q v r q v k d w v k h | z l a f k h u l v k v k h  
s l f v x u h d q g f d u l l w z l v k v k h p 1 V k l v  
p x w k d y h e h q z r q g h u x o  
Df hvr

h q f r x u d j h p h q w i r u D l g D w r f l d v r q  
p h p e h u / s u r y l g l a j f d h u  
f r q i l u p d v r q v k d w v k h l u z r u n z d v  
d s s u h f l d v n g 1

Dwydu l a j d n a j v k v d a g l a  
v k h g l i i h u h q w z r u g v f k r v h q e l h d f k  
z u l v n u / v k h d w n u w h { s a l l q k r z  
p x f k l w p h d q w w p h q w a v r q h g l a  
i r u h l j q a d q g v r u d w v h d w u h f h y h d  
s l f v x u h r i d f k l a g v k h | k d g | h w w v h h  
l a s h u r q a d a g s h u k d s v / l a v r p h  
f d v h u / z r x a g q r w d y h w v h h , 1 V r p h /  
z u l v n u d i v n u d u h v x u q k r p h / v x j j h w  
v k h w a h a j v k r i v k r v h i h d a j v = h y h q  
d i v n u u h v x u l a j w E u r r n d a h /  
P h a u r v h / Z d n h i l h a g d a g r v k h u a f d o  
w z q v / z l v k v k h d g r a w p h a w r i u h 0  
h q w l w f l y l d d a d i h / v k h | i h a w l w  
l p s r u w a d a w w z u l v n d q r v n w v k h  
k r v s l v a d o v x s h u l q v n g q h g w v k d a n l a j  
k l p d a g v k h D l g D w r f l d v r q i r u v k h  
f k d q f h w v h h v k h l u q h z e d e l d v  
v r r q d v s r w l e d h 1

W f g d l / z k h q q h d u d h y h u l  
q h z p r v k h u g h d y h u l a j d w E P F  
p x w r z q d f d p h u d d a g 2 r u d s k r q h  
f d s d e d h r i v a n l a j d a g v h a g l a j  
s l f v x u h / l w x q d n h d d a l r q h z r x a g  
p x f k d s s u h f l d v n v k h k r v s l v a d o  
v h a g l a j d s k r w j u d s k h u w v a d s d  
s l f v x u h i r u d p l d v a l s d u h q v l a v k h  
p l g 0 4 < 7 3 v / k r z h y h u / z k h q d p x f k  
d w v f d v x d o u h a v r q v k l s w  
s k r w j u d s k | s u h y d l a g / l w p x w  
k d y h e h q d u h p d u n d e d h d a g  
s u h f l r x v v k l a j w u h f h y h v k d w i l u w  
l p d j h r i d q h z e r u a f k l a g 1

Vkh p d l d a j z d v q r w  
h q v u h d v h o d h v = v k h D l g D w r f l d v r q  
g l g q r w p l w v k h r s s r u x q l v | i r u  
s u r p r v r q 1 V k h d w n u z l v k v k h  
e d e l w e l u k l q i r u p d v r q l a f o x g h g d  
s d u d j u d s k h { s a l l q l a j v k d w v k h  
s l f v x u h z d v s u r y l g h g Ô g x h w v k h  
v k r x j k v i x a g h w r i v k h p h p e h u r i  
v k h D l g D w r f l d v r q ^ E ` p d g h  
s r w l e d e l x v h r i v k h p r q h | v k h  
D w r f l d v r q k d v s u r y l g h g 10 D s u h 0  
d g g u h w h g h a y h a s h z d v d a r  
l a f o x g h g / l a w a v n g d a v f l s d v r q v k d w

i d v k h u z r x a g d n h w Ô f n q r z d n g j h  
u h f h l s w 10 r i v k h s l f v x u h v 1 + V k l v  
h a y h a s h u h p d l a q v d w a l f k h g w p d a l  
d w n u / g h p r q w a d v l a j v k h v l a d u x h  
i d f w v k d w l w w d a z d l v j r r g i r u v k h  
u h v s r q v h u d v n w p d n h u s d l a j d v  
h d v | d v s r w l e d h 1

Vkh v h d w n u w v k x v u h s u h v h q w  
d s d u a l s u r p s v n g u h v s r q v h /  
s h u k d s v d v p x f k d v d v s r q v a d q h r x v  
r x v s r x u l a j r i j u d v w x g h 1 l a g h h g / d w  
d h d w r q h v r a g l h u g h f d a g h g w v h a g d  
j u d v n i x o q r v n / z k l f k z r u n v w r x u  
d g y d a v a j h w g d l = r x u h { d p s d h r i  
v k h v n { w v k d w d f f r p s d q l h g v k h  
s k r w v l v r q h r i v k h v h D l g  
D w r f l d v r q d w n u / u h v x u a g z l v k d  
f u l v s Ô u h f h l s w d f n q r z d n g j h g 10  
v f u d z d n g d w v k h e r w w p d e r y h v k h  
v l j q d v x u h r i v k h i d v k h u 1 Z k h v k h u v k l v  
p d a z d v e x v l h u v k d a r v k h u / d w v  
l p s u h v h g z l v k v k h d u w r i  
s k r w j u d s k | / r u v l p s d q r w j l y h q w  
z r u g l g h f a d u d v r q v / l v l p s r w l e d h w  
v d l 1 U h j d u g d w / k l v a f r q l f u s d l v  
d s s u h f l d v n g q r z / v l a f h l w j l y h v x v  
v k h f r q v h q w r i v k h d w n u w v h q w d a r a j  
z l v k v k h s l f v x u h > v r p h v k l a j z h  
f r x a g r v k h u z l v h r a d j x h w d v l

P d a l d w n u w d u h s h u i h f w  
h { d p s d h r i v k h f a d w l f v k d a n d r x  
s u h v f u l e h g e l h w t x h w n d g y l v r u /  
z l v k v s h f l i l f / s r v l w y h p h q v r q r i  
v k h l v n p u h f h y h g + Ô v k h s l f v x u h  
f d p h r x w v z h a 10 d a g k r z s d h d v h g  
v k h u h f l s l h q w l v + Ô u h d a d l v d j u h d v  
v k l a j w k d y h d s l f v x u h r i v k h e d e l  
d w x f k d | r x a j d j h 10 l i q h f h w d u l /  
d a d s r a j | l v r i i h u n g i r u v k h  
a d v n q h w r i d u s d / x v x d a d  
g h v f u l e h g d v g x h w d g h a d l a  
u h f h l s w r i v k h s l f v x u h / r u g l i i l f x a l y  
z u l v a j + Ô y h n a w w u h v x u a g h i u r p d  
i x u a x j k / d a g l w w e h q z d l w a j k h u h  
i r u p h d a v k d w l p h 10 r u Ô x p d y l a j  
x a g h u f r p e d w f r a g l v r q v / d a g h y h q  
j h w l a j v k h s d s h u d a g h a y h a s h w  
z u l v n z d v d a f n | w r n h 10 1 D q r v k h u  
v r a g l h u / d v a q j d v k h z d v z u l v a j /  
w r n v k h r s s r u x q l v | w u h t x h w







dwlwədqf/ flwqj Flufxədu Qr1 4:  
daq dvnqaj vkh Dlg Dwrfləvīr q w  
dhwklv z lih nqrz vkh vkrxəgəxwəsdj  
irup hglf do vhuylf hv fryhuhg el vkh  
Z du Ghəsdwəp hqəv

Hyhq li surpsvng el vkh  
z ulwəhə h{shf vəvīr q vkdwvkh} z rxəg  
vhəg d vkdənQ rx qrv/ vkh shur qdō  
skudlaj daq vləf hūh səndvuh  
h{suhvvhg ləp daj ri vkhv dhwvhu lv  
fədu hylghəf h vkdwvkh vhuylf hp hq  
vləf hūh ydōxhg vkh surj ud p 1  
Z kləh vkhū lv reylrxv d wvr qj  
frpprq vkhph w vkh dhwvhu/ lww  
idvflədqaj w vhh vkh ydūdvīr q lə  
vkh z d l vkhv p hq dssurdfkhg vkh  
vəvīn1 Vrp h duh vdkhu ləqirup d  
vlj qlaj rii z lvk diluwəqdp h/ z kləh  
rvkhū vshə rxwvkhū ixəp ldvəlj  
vvh1 Vrp h kdyh vjshg vkhū dhwvhu/  
z klfk lv rivəhə pruh d j lēh exw  
z klfk dər frəfhdə vkh vqh v ri  
shur qdōv vkdwfdə vkrz vkrxj k  
lq vkh kdəgz ulwəhə qrvv1

Vkhv ədvwū slhf hv duh  
qhəv sūqəng lə əəfn dhwvhu/ ru  
z ulwəhə rxw lə h d j d q w v f u l w / ru  
t x l f n d / v f u d z d h g / d v l i v k h z u l v h u  
v l p s d z d q v n g w g l v f k d j h d g x v j  
daq p r y h r q 1 V r p h v x j j h w h d v h  
daq i x h q f j z l v k v k h z u l w h q z r u g /  
z kləh rvkhū duh vrp h z kdwf əp v l /  
dnh d glvs əd l l a j y d u j l a j d y h v r i  
hgxf d v r q d a g i d p l d d u l v j z l v k v k h  
irup v r i v k h g d l f l u h p d l q / y h j  
w x d j r x u / Ō h v i 1 1 V k l v k l q w d w k h  
z d l l q z k l f k z d u l p h / d n h v k h  
h { s h u h q f h r i v k h i d u z d l e l u k r i d  
f k l a g / f d q e o u v r f l r h f r q r p l f d q h v >  
uhj d u g d h w r i v k h u k r p h w z q /  
f l y l d d q s u r i h v l r q r u d y h o r i  
hgxf d v r q / d ə v k h v h p h q z u l v h d v  
p h p e h u r i v k h X q l v n g V v d v h v  
p l d v ə l j d a g d v i d v k h u r i q h z e r u q  
f k l a g u h q / d ə k d y l a j e h q h i l v n g i u r p  
v k h v d p h k r v s l v d o s u r j u d p 1

P r w z u l v h u /  
x q g h u w d a g d e d k h v l v d l a j w v s h d n  
z l v k f r q i l g h q f h d e r x w d f k l a g v k h j  
g l g q x v h w n q r z l q s h u r q / p d l q v d l q  
D f h v r

d fhuwəlq uhvuyh uhj duglaj vkhū  
laj d q w / j h q h u d a j u h i h u l a j w k l p  
r u k h u d v Ō k h e d e l Ō d a g u d u h d  
p h q v r q l a j d q d p h 1 V k l v p d n h v  
h v s h f l d a j l a v n u h w l a j v k h d h w v h u l a  
z k l f k p h q g r v ə l n d e r x w v k h u  
f k l a g u h q 1

R q h z u l v h u / f d h d u j v k l a n l a j  
r i k l v g d x j k v h u d v d v s h f l i l f s h u r q  
d a u h d g l / v d l v k h Ō d a g k d u g d z d l w  
i r u d d y h d a g d f k d a f h w p h h w k h  
j r x q j a d g l z k r L x q g h u w d a g l v  
d a u h d g l v ə n l a j v x q e d v k v d a g  
f d u j l a j r q l q v l p l a d u v k r f n l a j  
z d l v Ō D a r v k h u l p d j l a h v k l v q h z  
v r q i r ə z l a j l q k l v i r r w v h s v /  
v d l l a j k h l v Ō q g h g d k d s s j i d v k h u  
w k d y h k d g d v r q z k r z l ə  
v r p h g d l v ə n h p j s a d f h l q v k h  
P d u l q h v Ō

Vkhv dhwvhu z rxəg dnh d  
qrweh hvshfildə ydōdēh iurp d  
p ldvəlj klwəf do vədqəsr ləvī Vkhj  
vvhəxv qrvklaj dər xwvkh frxw h ri  
vkh z d u / r u v k h h y h j g d l h { s h u h q f h  
r i v k h p h q z k r i r x j k v i D w p r w /  
v k h j v k r z v r p h r i v k h p d a j s a d f h v  
d u r x q g v k h z r u a g l a z k l f k X 1 1  
v h u y l f h p h q i r x q g v k h p v h y h v  
g x u l a j v k h v h j h d u 1

Z kdəvkhj ri ihu ləvndə ri  
qhz v dər xw edwəh v d a g w r r s  
p r y h p h q w l v d v h u h v r i v p d ə  
j d p s v h v r i v k h z d l v l a z k l f k d i h  
d w k r p h z h q w r q / d a g l a v l w v r q v  
d w n p s v n g w v k d u h v k d w f r q l v q x l v j  
e l d ə z l a j i r u h q m j p h q w r i d  
e u r d g d k x p d a j / h w s u r i r x q g d  
s h u r q d o p r p h q v f l y l d d q v d w k r p h  
p d l q h y h u w x d x q g h u w d a g v k h  
v r a g l h u w z d u l p h u h d d v j / e x w v k h j  
f d q w j w v k d u h v k h u r z q q h z v / w  
j u r x q g v k h z d a g h u h d a g u h p l a g  
k l p r i v k h z r u a g z d l v a j i r u k l p 1  
V k h h { l w n q f h r i v k l v s u r j u d p  
v s h d n v h a t x h q v d r i v k h z d l q r q 0  
p l d v ə l j l a v l w v r q v v r x j k w w  
v x s s r u w v k h v h u y l f h p h q d e u r d g  
g x u l a j v k h j h d u r i Z r u a g Z d u l l /  
d a g k l j k d j k w v k h x q l t x h d

l q v p d v n d e l d v j r i d k r v s l v d o w  
w x f k d s h u r q x d i h d w v k h p r w w  
y x a g h u d e d d a g p r p h q w x v r i  
v l p h v 1

Ō r x k d y h d f k l a g / x v k h  
s k r w v v d l g 1 Ō r x p d l e h i d u d z d l /  
l a d a g h a y l u r q p h a w z k h u h v r p h v k l a j  
d n h e l u k l v q h d u j l u h d y d q w e x w  
v h h / v k d w z r u a g v l w ə h { l w w = j r x k d y h  
d f k l a g / d a g k h u h l v d s l f w u h r i v k d w  
v a j q h z i d f h k

Vkhū lv hylghəf h vkdwvkh  
surj ud p z d v shuf hlyh g lə vkh  
v x s s r u w y h i d v k l r q 1 R q h p d a z u r v h  
Ō l v l a g h h g j u d v i j l a j w n q r z v k d w  
z h l a v k h v h u y l f h k d y h s h r s d h d n h  
j r x e h k l a g x v Ō z k l ə h d a r v k h u  
v ə v i n / Ō r x z r q x w n q r z z k d w d  
f r q v r a d v r q l w l v w v h h v x f k  
j r r g q h w d ə d u r x q g p h Ō l l a d a j /  
d a r v k h u p d a j / v s h d n l a j q r g r x e w i r u  
p d a j = Ō h w w k r s h ) s u d l v k l v z d u  
z l v k M s d a g h a g v v r r q v r v k h v h u y l f h  
p h q ) z r p h q f d q u h v x u q w v k h  
a d a g ) a y h g r q h v v k h j d g r u h Ō

Dwklv uhp ryh lə vlp h/ daq  
z l v k q r v k l a j p r u h w j r r q / z h f d q  
r a d k r s h v k h j d ə p p d g h l w v d i h d  
k r p h / d a g v k d w v k h u a d v h u d y h v / d a g  
v k h d y h v r i v k h u v r q v d a g g d x j k v h u  
j u r z l a j x s l a v k h e x v j j h d u d i v h u  
v k h z d u / z h u h k d s s j r q h v 1 V r p h r i  
v k r v h f k l a g u h q d n h d v l w ə d y h l a v k h  
q h j k e r u k r r g v d a g w z q v d u r x q g  
E r w r q d a g v k h E X P h g l f d o  
F d p s x v 1 S h u k d s v v r p h r i v k r v h  
s k r w v d u h v l w ə v x f n h g l a w r a g  
i d p l d d ə x p v / d w ə h v d y h u r i  
k l w v u j p x v n d v s h d n l a j r i v k h z d l  
d i h p r y h v r q h y h q l a v k h p l g w r i  
z d u w x q f h u d l q v j / d a g s h r s d h u h d f k  
r x w v r v k h u w r i i h u z k d w f r p i r u w  
d a g v x s s r u w k h j f d q 1



Dətxrvv vāhəq iurp dhwvhu lə vkh irəghu  
Ōkrsvləb Dlg Dwq1 Z Z ll= Vhuylfhp hqvx  
uhsdhv dfnqrz d g j l a j s l f w u h v r i e d e l h v  
4<76078Ōlq vkh Erw r q X q l y h u m v j D a p q l  
P h g l f d o C e u d j D u f k l y h v 1

# Ihdwuh

## Wkh Flqf lqqdw Fkr dhud Hslghp If ri 4; : 6 dv d l r uf h lq 4<wk Fhqvw ul Xuedq Frp p xqlw G| qdp If v

Wkhrgruh Z 1Hyhwr dh/ SkG  
Ghsduwp hqwr i Klvw ul  
Z hvvhuq Nhqxfn| Xqlyhuwlv

Gu1WkhrgruhHyhwr dhlvfxuuhqwl d q Dgrxqf wDwlwzqwSurihwruri Klwruj dwQruwkhuq  
Nhqxfn| Xqlyhuwlv d qg vkhXqlyhuwlv ri Flqflqqdw1Ru j lqdad iurp Flqflqqdw/ Gu1Hyhwr dh  
uf hlyhg klvED/ P D/ d qg SkG iurp vkhXqlyhuwlv ri Flqflqqdw lq 4<: 91Khz hqwr q w vhu yhdv  
d q DwlwzqwDuf klylwr q vkhDæhuwVdelq Duf klyh1X oip dvtq / klv vndf klaj f duhu xqir qhg lq  
Haj æd qz khuhkhvshqw63 | hdu/ uhuulaj dv DwlwzqwSulqf lsdori ly| eulgj hFrp p xqlw  
Fræj h lq Ghyrq1Divru dnylaj Ghyrq/ khuhw uqhg z lvk klv z lihWlvkd w Flqflqqdw z khuhkh  
frqvlqxhv w vndf k1

**D**ffruglaj w p d q l  
klw uldqv ri p hglflqh/  
fkr dhud z dv æd sulp l'uh  
hslgop lhgx [ l| h v'fdn  
Wkh klw urj udk| ri  
fkr dhud lv lqghhg ydvw gudz lqj vkh  
vndg| dvtvqr q ri d z lgh erg| ri  
vfkr ædw z kr kdyh vlqfh vkh 4<; 3v  
lqfuhdvlqj d irfxvhg xsrq vkh  
h{dp lqdw r q ri fkr dhudxv hslghp lf  
frqvht xhqf hv r q uhj lrqdo ru æfdo  
duhdv1 Ht xda| lp srwæqwl fkr dhud  
uhvdufk dar lqvhuvhfw z lvk nh|  
klw ulfdo duhdv vxfk dv  
wædqvsr wæw r q/ p lj udlv r q/ sxedf  
khdok ghyhæ sp hqwl d qg  
xuedq l} dvr q1 Jlyhq lw eur dg  
yduhv ri lp sdf w/ hslghp lf  
fkr dhud sur ylg hv d xv hxoedf ngurs  
w ehvhu xqghuwædq krz lw  
ylvlvæw r q frxæg diihfw lp srwæqwl  
Df hv r

hp hj lqj frp p xqlw hv vxfk dv vkh  
Rklr Ulyhu flw ri Flqflqqdw lq vkh  
4; : 3v1'4`  
Rqh ri vkh prw ihduhg  
glvhdv ri vkh qlqhvnhqvk fhqvw ul /  
fkr dhudxv fdxvdw r q uhp dlqhg d  
p | wlvurxv txhwwvkr xj kr xwp r w  
ri vkh fhqvw ul ru vkh p dmulw ri  
vkhvh | hdu/ vkh p hglfdo frqv hqxv  
ehdh yhg vkw dp ldv p d z dv fkr dhudxv  
sulqf lsd o fdxvdo dj hqwl Krz hyhu/  
fdxvhv rvkhu vkdq h{sr vxuh w  
sr lvr qrxv edg du/ vxfk dv vkh  
dfv r qv ri vkh vxq/ p r r q/ d qg wæw/  
dp r qj p d q l r vkuh glyhuw vkr ulhv/  
z huh rivnq sur sdj dvtg lq vkh hudxv  
p hglfdo fruhv sr qghqf h w h{æallq  
fkr dhudxv iulj kvixosuhv hqf h1  
Hslghp lf fkr dhud iluw  
dsshduhg lq Hxursh lq 4; 4:/ d qg  
z dv ehdh yhg w kdyh duhyhg iurp

Lqgld vsuhdglaj dæqj wægh/  
p ldvæul / d qg slq ulp dj h ur xvhu1 Dv  
vkh fhqvw ul surj uhvhwg/ vkh lp sdf w  
ri frp p huf h/ srsxæw r q  
p ryhp hqwl d qg xuedq dylaj  
frp elqhg w vhw vkh wæj h iru d  
vhu hv ri z ruæz lgh hslghp lf v  
z krvh prw vlj qlilfdqw z dyhv  
wæxfn ehvz hhq 4; 5< d qg 4; : 81Wkh  
ædw p dmu z hvhuq hslghp lf  
uhdfkhg Hxursh lq 4; <51Kdp exuj /  
J hup d q l / d nh| lp plj udlw  
hp edundw r q sr lqw sduw f xæul  
vxiihug gxulaj vklv ylvvlvæw r q z lvk  
ryhu ; /333 uhfrughg ghdkv1'5` Dv  
klw uld q Fkduthv Urvhqehj  
dvhvhwg/ Ôfkr dhud z dv vkh fædwlf  
hslghp lf glvhdv ri vkh qlqhvnhqvk  
fhqvw ul / dv sædj xh kd g ehq ri vkh  
irxvnhqvk1 Z khq fkr dhud iluw  
dsshduhg lq vkh Xqlvng wæwlv lq  
66

4; 65/ | hørz ihyhu dāg vp dō sr {/ vkh j undwhslghp lf glvhdvh ri vkh suhylr xv v r fhqvxulhv/ z huh qr arqj hu vax d qdvr qdosur edhp v10^6` Divnu plgcfhqvxul vkh vkuhdw ri fkr chud vlp xadving pruh fr ruglqdvng frppxqlv uhvraqvhv/ hvshflda d p hglfdoxqghuvlqglqj hyryhg frqfhuqlaj vkh vrfldo frqglvrqv vkw lqfuhdvng fkr chudx yluxdqfh dāg ghdk udv1 Dv vkh qlqhvnhqv fhqvxul surjuhvhg/ vkh p hqdfh ri fkr chud khoshg ihg vkh xuedq uhirup lp saxh dv arfdoduhdv arnhg w hdp lqdv vkh euhglqj jurxqgvri lqihfvr q1

Gxulaj vkhvh | hdu/ fkr chud z dv fhdud d vfrxuj h vkwdeurxj kw sdqlf z khuhylw dsshdug1 Vkh lp sdfwri vkh frpp d edflaxv z dv vax d ghydvwlvaj / dāg vkh vshg dw z klfk fkr chud nlāng z dv sduf xadud iuj kvnlqaj 1 Vkh r qvhw ri vj p svrp v eurxj kw derxwerxw ri ulf z dvnu dnh gldukh d/ yrplwaj / dāg fudp slaj / exwlwz dv vkh uhvaxlvaj / dāg rivnq udsig/ ghk| gudvr q vkw z dv prw vkrfnlaj / iuh xhqvd eulq lqj ghdk zlvklq d pdvnu ri kr xw1 Xsrq ghdk/ erglhv z huh iuh xhqvd diw fxuhg lq w dihdosrvlvr q dāg z huh vxevht xhqvd exuhg lq vxfk d vdv1 Vkr vh diihfvng z rxag

vkulqn lq w d z l} hqhg fkdudvnu ri klv2khu irup hu vno zlvklq d itz kr xw/ zklh uxsvuhg fcladulhv glvfruhg vkh vnlq/ vxulqaj lweadfn dāg exh1 Vkh hihfwz dv w p dnh pruvd vly xqltxh d ylvch=sdvnuqv ri ergld ghfd z huh h{dfhuedvng dāg dffhdudvng dv lq d vlp h aevh prvrq slfvxuh/ w uhp lqg dōz kr vdz lwri ghdkx xj d kruurudāg xwvnu lqhyvlvdvly 1^7

Qlqhvnhqv fhqvxul vhdvp hq w p hhwxvk d kruledh glvhdv ydvhg ryhu vkh ghfdghv/ dāg surgfxhg d frqvavqvd fkdaj lqj duud| ri qrwxpv dāg Df hv

uhp hglhv/ lqf xglqj dssdfdvrv ri ylvhjd/ p xwvug/ axgdqxp/ dāg f darp hodv z hōdv r vkuh lqj unghq w gudz q iurp vkh dj hv p dvnu d p hglfd1 Eargdhwlvaj dāg dvrvwng edvkv z huh dvr wlvh/ exw dō zlvkrxw hihfv lq vnuv ri fxudvlyh surshuivh/ ghdk udv vkr xj kr xw vkh fhqvxul vkrz hg dwh ydvdvr q ehvz hq vkr vh p hglfd d vhdvng zlvk vkhvh dāg r vkuh fxuhv/ dāg vkr vh wvad d aefnlaj p hglfdo lqvnu/hqvr q1

Lw z rxag qrw eh xqvo 4; ; 6 vkw ixvuh Qreho su}h z lqqhu Gu1 Urehw Nrfk +4; 7604<43, lghqvilhg vkh frpp d edflaxv dv vkh fdxvh ri fkr chud1 Lq grlqj vr kh khoshg w frqilp d sdvkrjhqf h{sdqdvr q iru vklv frqvaj lrxv glvhdvh\ hwwhyq lq vkh idf h ri Nrfkx hylghqfh/ vkhuh z huh vkw surplqhqw vflhqvw vxfk dv P xqlfkx Pd{ yrq Shwqnrihu +4; 4; 04<34, z kr dv avh dv 4; ; 7 vkw surihvhg d ehdhi lq pldvp d dv fkr chudx fdxvlyh dj hqv Dq dgglvr qdo vns wz dugv uhdv suhyqvr q fdp h lq 4; <6 z khq Gu1 Z dāghp du Kdiidq +4; 9304<63, surgfxhg vkh iluw vxffhwixo ydfflqh irufkr chud/ z klfk riuhg d p hdxuh ri krsh iru pruh vj vnp d vfr qvr d

Dakrxj k hihfvlyh vhdvp hq w qrz h{lvw lqf xglqj ydfflqh v dāg rudo unkl gudvr q vkhudslhv/ fkr chud uhp dlqv d vhu r xv glvhdv z kr vh frqvaxhg suhvqfh fdq eh irxqg lq vkh P lggd Hdwdqg Diulf/ z khuh vhu r xv hslghp lfv rffxuhg lq vkh 4<93v dāg 4< 3v1 Lq 4<<4 fkr chud dj dlq wvfn vkh Dp hufdv/ iru vkh iluwvlp h lq 433 | hdu/ huxsvaj lq Shux z khuh lw vsuhg w lqihw vrp h 733/333

shrsdh z ruogz lgh dāg fdxvh 7/333 ghdkv1 Fkr chudx frqvaxlvaj del d vly w nlō z dv r qfh pruh hylghqfh gxulaj d 4<<7 rxvuhdn lq ] dlhv/ z klfk nlāng 83/333 uhixj hhv/ dāg hyhq pruh uhfhqv lq Kdlw z khuh kxqguhgv ri vkr xvdāgv kdyh ehq diihfvng vlvqfh vkh uhfhqwhdwt xdnh1 ^8`

Dv hdu d v 4; 87/ Gu1 Mkq Vqrz ri Orqgrq vxjjhvhg vkw d fkr chudx vsuhg frxag eh vad hg w frqvav lqdvng gulnlaj z dvnu Klv lqyhv vj dvvr qv h{dp lqhg z dvnu fradvvhg iurp vkh Ulyhu Vwdp hv/ zlvk sduf xadu dvnu qvr q jlyhq w vkr vh vxssdhv z kr guhz vkhlu z dvnu iurp vhfvrqv ri ulyu z dvnu qrwidu iurp vhz dj h rxvhw slshv1 lurp klv uhvdvfk/ Vqrz surgfxhg frqylqfaj gv d/ dāg vxjjhvhg suhyqvlyh frxvhw ri d vvr q> krz hyhu/ kh aefnhg d xqlyhvd d f nqrz dgj hg fdxvlyh dj hq w vxfk dv vkh plfureh vkw frxag eh dvaf khg w vkh frqvaj lrxw vsuhg1

Dakrxj k Vqrz z dv r q vkh ulj kw vadfn/ klv z run z dv vōz w lqioxhfh sxedf khdk s r d f | / ru frqylqfh vkh p hglfdo frppxqlv vkw dlqihfvng z dvnu z dv d vr xuf h ri vadqv lvr q1 Qhyhvkhdw/ lq vlp h hslghp lf glvhdv vxfk dv fkr chud glg khs hwledvk erdugv ri khdk1 Dv vkh erdugv suhvqfh ehfdp h pruh undgl d fffhsvng zlvklq flv exuhxfudlvh/ vkh| frxag irfxv vkhlu dvnu qvr q xsrq lp surylaj xuedq kjjlhq1 Vkh lqlwdo sxedf kjjlhq gulyh z dv dng el Haj adāg vhfuhv d ri vkh Srru Odz Frpp lvr q/ Hgz lq Fkdgz lfn1 Lq 4; 75 Fkdgz lfn sxedvkhg klv Uhsru lq w vkh Vdqlv d Frqglvrqv ri vkh Odrxulaj Srsxav lq Eulv d q z klfk guhz dā hdu dān ehvz hq xuedq

dylaj frqglwrv dgg glvhdvh1  
 Krz hyhu/ lq Eulvalq dgg hahz khuh/  
 vkh erdugv ri khdak vkdw z huh  
 fuhdvng gxulaj vkh 4; 73v dgg avhu  
 z huh rivng vnp srudul/ aafnhg vkh  
 ixasrz huw ri vqqlvalul hqirufhp hqv/  
 dgg idlchg w xqghuwatqg vkh dfvdo  
 qdvuh ri glvhdvh1Vdnhq dv d z kr dh/  
 vxfk erdugv z huh idlud lqhiihfvyh  
 z khq dq hslghp lf wuxfn1 lq  
 dggglwrv/ afdo frpp xqlw dndghv  
 z huh ihduxori vkh edg sxedflw d  
 fkr dhud hslghp lf frxag kdyh rq  
 ruglqduj exvlqhw dfvylvhu1  
 Qhyhukhdw/ hyhq lq vkh idf h ri  
 vxfk dp lvalwrv/ el vkh 4; 93v vkh  
 erdugv ri khdak frqfhswkdg vsuhdg  
 w vkh Xqlvng Vdvhv/ dgg vxfk  
 erdugv z rxag lq ixvuh ghfdghv  
 frpsho xuedq duhdv dfurw vkh  
 qdvrv w vxevfuleh w vkh jhqhudo  
 vngqhv ri vqqlvalul uhirup dv d p hdqv  
 ri glvhdvhfrqvr d'9`

Vkh Flqflqqdw Fkr dhud Hslghp lf  
 ri 4; : 6

Flqflqqdw avd p dnu  
 edvwh z lvk fkr dhud rffxuhg lq 4; : 61  
 El vkh ehj lqqlaj ri vkdw ghfdgh  
 Flqflqqdw z dv vkh vklug dndglaj  
 lqgxvudoflv lq vkh qdvrv dgg d  
 p dqxidvulaj dgg frpp hufldo  
 edvhu iru dq h{sdqglaj qdvrv/ idf w  
 z klfk j dyh vxewafgh w vkh flw v  
 fadp w eh vkh Ot xhhq Flw ri vkh  
 Z hvd Ot Flqflqqdw srsxatwrv ri  
 ryhu 533/333 dyhg iru vkh prwsduw  
 lq ghqvhd furz ghg kr xv lq lq vkh  
 flw v fhqwdodvlq/ z klfk wvhwkghg  
 qruw iurp vkh hgjh ri vkh Rklr  
 Ulyhu iru ryhu d pldh1 Flqflqqdw  
 z dv dav d wdvqsr uwqh{ xv dv lwvdw  
 dwvkh vnp lqxv ri vkh Pl dpl dgg  
 Hulh Fdqdo/ dgg divhu vkh 4; 83v lw  
 h{sdqglaj udlardg dqnv vng vkh  
 duhd w Qhz \ run/ Fklfdj r/ dgg  
 srlqw vxvk1 lq dggglwrv/ yleudqw  
 ulyhuerdw wadiif surylghg er vk  
 xsulyhu dffhwv w Slwvexj k dgg  
 Df hvr

grz qulyhu frqqfwrqv dævkh z dl  
 w Qhz Ruchdqv1

El vkh 4; 93v qhz pruh  
 vdoeurxv vxexev z huh sadqvng  
 darj vkh vxurxqglaj klavghv/  
 z klfk h{vngghg vkh flw v udglxv el  
 ryhu iru xpl dhv iurp vkh fhqvnu1 lq  
 dggglwrv/ Flqflqqdw z dv d flw ri  
 lp plj udqw/ sduwri vkh avh 4; 73v  
 qdvrvdo vxuj h lq lp plj udqw  
 duulyda1 Dv vkh fhqvxv iurp vkhvh  
 |hdw uhyhdng/ 5: ( ri vkh afdo  
 srsxatwrv z dv J hup dq aer uq/ dgg  
 vkh shufhvdlj h ri vkh z run irufh  
 vkdwz dv J hup dq z dv ryhu 73( 1^`  
 Lw z dv vkhvh lp plj udqw jurxsv/  
 p dql ri z krp dyhg lq furz ghg  
 dgg sru frqglwrv/ vkdw rivng  
 vxiihuhg vkh euxqwr i  
 fkr dhudv hiihf w dgg  
 wrn vkh eadp h iru  
 vkh vsuhdg ri vkh  
 glvhdvh1

Fkr dhud kdg  
 wuxfn Flqflqqdw  
 ehiruh/ duulyaj iluw  
 lq 4; 650671 Vklv iluw  
 hqfrxqvnu surgx fhg  
 ; 64 ghdkv1 Fkr dhud  
 uhv uqh/ ehvz hq  
 4; 7; dgg 4; 83 dgg

fadp hg d ixukhu 7/447 dyhv/ dgg  
 dsshuhg dj dlq lq 4; 99 z khq lw  
 nlathg dq dggglwrvdo 5/35; flw  
 uhvghqv1 Krz hyhu/ el vkh vph ri  
 vkh 4; 99 hslghp lf/ dkrxjk dv  
 vhyhuh dv ehiruh/ vkh flw kdg  
 hyrghg lq vnuv ri lw frpp xqlw  
 uhvrvqvhu1 Ddq L1 P dufxv  
 lp sr uatw uhvdufk kdvlqglfvng  
 dvlvghv kdg fkdaj hg dgg vkhvh  
 qhz flufxp wafghv Ot vnp hg  
 gluhfv iurp vkh qrvrv ri flwv dv  
 vrfldoxqlw dgg khdak dv d glv uhv  
 sxedf suredp Ot ^; ` Dv P dufxv  
 ixukhu wvng/ Ot vkh 4; 99 fkr dhud  
 rxvuhdn pdgh lw sr dwf daj  
 lqh{shglhqv dgg gdaj hurxv w  
 sxuxh flw Ovavh dgg lqvuhvwj urxs  
 vt xdeedv z lvr xw iluw hufvqj

Fkr dhud kdg wuxfn  
 Flqflqqdw ehiruh/  
 duulyaj iluw lq 4; 651  
 Vklv iluw hqfrxqvnu  
 surgx fhg ; 64 ghdkv1  
 Fkr dhud uhv uqh/  
 ehvz hq 4; 7; dgg 4; 83  
 dgg fadp hg d ixukhu  
 7/447 dyhv/ dgg  
 dsshuhg dj dlq lq  
 4; 99 z khq lwnlathg  
 dq dggglwrvdo 5/35; 1

khdak ghstdwv hqv lq vrp hirup Ot  
 ^` Vkhuhiruh/ flw erdugv ri khdak  
 glg qrvvpsd dsshdu exwz huh d  
 frqfhuvg uhvrvqv lq djkw ri  
 sr dwf do dgg srsxatw suhwxuhv1 lq  
 dggglwrv/ divhu 4; 98 vkhuh z dv d  
 fhdup ryh wz dug h{vngglaj erdug  
 srz huw w pdnh iru d pruh wxd  
 ixqvrv qdo ruj dql} dvr q1 Dfr uqlaj  
 w P dufxv dadd vl/ Ot r fulw do  
 lwxhv Ot kdg w eh uhv rghg = Ot kh  
 edvhu iru p hglfdosulp df | Odqg vkh  
 Ot r qv wvewhv hq flw dgg wvhu iru  
 pxqlf ldo frqvr ot ^43` Vxfk  
 sr dwf do frqv wv/ dv z hadd p hglfd  
 ghedv ryhu fkr dhudv fdxvhv/  
 pdgh suhdudwrv iru hslghp lf v  
 pruh gliilfxat Krz hyhu/ el 4; 9: d

qhz flw khdak adz  
 z dv sdvhg vkdw  
 ilup d hvvedvkhg d  
 khdak erdug z lvk val  
 srz huw dgg wadii w  
 ghdyhu lp suryhg  
 vqqlvalul frqvr o dgg  
 hqirufh qhz khdak  
 frghv1^44`

Dkrxjk surj uhv  
 kdg ehq pdgh lq  
 uhirup lqj khdak  
 surylwrv darj z lvk

rvkhu dvshw ri flw jryhuq hqv  
 4; : 3v Flqflqqdw z dv z udfnhg z lvk  
 qxp hurxv frqfhuqv/ lqfagljaj  
 sr dwf do vfdagdv dgg uydulhv dv  
 z hadd hfrqrp lf glylghv/ z klfk  
 fuhdvng d jhqhudaq xqs dhdvdq  
 rshudwaj hqylurqp hqv z khq  
 vlj qlilfdqw fulvhv rffxuhg1 Vkh  
 qdvrv do hfrqrp lf uhfwvrv ri 4; : 6  
 pdgh pdvhuw z ruw dgg  
 frqv exvng w vkh jurz lqj aderu  
 xquhwri vkh shulg/ z klfk vdz vkh  
 flw dyhudj h vz hqv Olyh vhu rxv  
 wvnhv d | hdu gxulaj vkh 4; : 3v1  
 Hfrqrp lf fkdahj hv/ sr dwf do  
 glvrvug/ dgg avwp dunhw w flw hv  
 ixukhu z hwdæ dgg ghg w dj qhudo  
 vsluw ri xuedq pdalvhu1 Dv  
 vrf lr arj lw Miiuh | Kdl gx wvng/  
 68

ÔFlqflqqdvdv ihw ehvhhg el  
xuedq vrfldolœ/ iurp lqvnp shudqfh  
daq survwxvraq w ylrhqw fulph  
daq vkh| fulwfl}hg flwv riilfldov iru  
ehlqj wr fruxswr ulqfrp shvnhqww  
p dlqvdq rughuÔ^45`

\ hwlwz dv suhflvhq lq vxfk  
sr dwf do dgg vrfldo flufxp wdaqfhv  
vkdwFlqflqqdvdv œdwwp dnu fkr dhd  
dwdfn rffxuhg1 Vkh 4;:6 hslghp lf  
sur gxfhg 53: ghdkv rxwri d wvdo  
flwv pruwdv ri 8/974 iru vkw| hduf  
^46` Dakrxjk vkh flylf khdk  
iudp hz run kdg fkdqj hg/ dv glg  
flwv h{shfvvraq/ fkr dhd uhp dlqhg  
d ghgdg vkudw w p dql œfdo  
uhvghqw dgg d fkdj hg sr dwf do  
lw xhiru œfdoj ryhuqdfh1

Fkr dhdv Duulydodag Lqihwvraq

Vkh 4;:6 fkr dhd hslghp lf  
iluw huxsvng lq Qhz Ruchdqv rq  
l heuxduj </ 4;:6/ dgg vxevt xhqv  
vdyhdg qruw derdug vkh  
wvdp erdw Mlkq Nlgruh/ z klfk  
vxiuhg vkuh fkr dhd ghdkv ehruh  
duylqj lq Flqflqqdvrq P d| 56/  
4;:61^47` Vkh iluwidvdo fdv z lvk  
flwv rujlqv z dv vkw ri Sklœvqh  
Jxqgarfn/ dj hg 78/ ri 8: Rdyhu  
Vwhhw/ z klfk rffxuhg rq Mqh 47/  
4;:6 lq dq duhd fœvhw vkh furz ghg  
Ryhu vkh Uklqh duhd qhdu vkh flwv  
fhqvut E| vkh hqg ri Mq/ 44:  
ghdkv kdg irœz hg/ dgg vkh  
glvhdv glgqv ixœ dedv xqvo  
Rfwehu4; / 4;:61

Gu l M M Txlqq/ vkh flwv  
khdk riilfu/ ehdhyhg/ dv uhdvng  
lq klv 4;:6 uhsruw vkw Ôqr  
frqghvraq fdq eh hvœdvkhg  
ehvz hqg vkh iluw idvdo fdv ri  
fkr dhd dgg d| wvdp erdw œdglqj /  
udlar dg ghsrw/ lp srwng fkr dhd  
sdvnhq/ ru shwrqv iurp d œfddv  
z kuh vkh glvhdv kdv ehq  
suhldqj Ô ^48` Ixukhup ruh/  
Txlqqv ylz srlqw z huh vnhq dv  
dxvkr uvvlyh vqfh kh vnyhg dv d

Df hvr

uhsuhvqvlyh ri vkh flwv v riilfldo  
sxedf khdk ruj dql} dvraq1 Txlqqv  
frqœvraq vxjjhvng vkw Ôkr dhd  
uhtxlhg fhvllq jhrœjldo dgg  
p hvnr œjldo frqglvraqv iru lw  
ghyhar sp hqvo dgg Ôhvœvng  
vkrxjk vkh qhvxv v| wvnp el  
h{kdxvraq/ ihdu/ dq{lhv/ ru rkvhu  
ghsuhvqj p hqvo hp rvrq>  
vkrxjk vkh glj hvlyh ruj dqv el  
lp suxghqfh lq hdvqj dgg gulnlqj >  
dgg vkrxjk uhvsludv ul dgg  
flufœdv ul v| wvnp v/ el lqkdœvraq ri  
qr{lr xv ydsru ru ri ylvdvng dgg  
lp sxuh dluÔ ^49` Lq dgglvraq/  
Txlqqv uhsruw vxjjhvng vkw  
Flqflqqdvr 4;:6 erz ho glvrughw  
z huh/ shukdsv/ qrw hyhg Ôvœh%  
fkr dhd/ dgg kh ixukhu ghfœvng/  
%vkh hslghp lf ixuqvkhg qr surriv  
ri frqvaj lrqhwlqghhg yhu ihz ri  
vkh fdvz z huh dw dœ uhrqflœedh  
z lvk vkh vkr ul ri frqvaj lrqÔ^4`

Lq frqvœdv vkh ihghudo  
riilfldo lqxlq lqw vkh hslghp lf/  
vkh Fkr dhd Hslghp lf ri 4;:6 lq vkh  
Xqlvng Vœvhw/ gliuhg lq vnyhudo  
vœvœvdo z dlv iurp Txlqqv  
dvhwv hqwr vkh hslghp lf1 Vkh  
ihghudo lqxlq z dv xqht xlyrfdo lq  
lw fkdj h vkw Ôkh fkr dhd  
hslghp lf z dv fduvhg iurp Qhz  
Ruchdqv w Flqflqqdvr el kxp dq  
ehlqj vÔ dgg duj xhg vkw Ôkh iluw  
fdvh ri fkr dhd rffxuhg lq  
Flqflqqdvr dvnu vkh duyl do ri vkh  
wvdp erdw Mlkq Nlgruh/ iurp Qhz  
Ruchdqv Ô^4;` Vklv grfxp hqvdœr  
frqœghg vkw vkh iluw fdv kdg d  
frqghvraq w vkh wvdp erdw œdglqj  
dgg rkvhu fdv eur nh rxwlq vkh  
ylflqlv ri vkh iluw dgg vhrqg  
fdvh1 ^4<` Vkh qdvraqdo uhsruw  
vxjjhvng vkh srweldv vkw  
fkr dhd z dv frqvaj lr xv dgg vsuhg  
vkrxjk vsflilf frqvœv dgg flwv  
œf dvraqv1 Vklv frqœvraq vkrz hg  
dq hduj dz duhqw ri lqihvraqv  
vdqv lvrq/ d ghfdg ehruh  
Nrfkv frqilup dvraq/ dgg ixukhu

duj xhg vkw Ôdvqlv ul vflhqfh Ô dv  
vnhq lq Hxursh z dv vkh vrœvraq w  
vkh ghvœvqj suredp v srvhg el  
fkr dhd1

Rq vkh œfdo dnyhœ vkhuh  
z huh rkvhu iurp vkh phglfdo  
frppxqlv z kr dnhz lv frqvnhvng  
Txlqqv riilfldo yhuvrq ri vkh  
hslghp lf ri 4;:6/ dgg/ lq vœv/  
hqrwng vkh qdvraqdo uhsruw  
yhuglv lru h{dp sdv/ Gu l l1  
Grz daj / d sk| vfldq edvhg dw<v  
dgg Clqq wvhw fœvhw w p dql ri  
vkh fkr dhd fdvz/ z urvnlq 4;:6/ vkw  
vkh Ôsvhvng hslghp lf kdv sdvhg  
dœqj urxvri vdyhœ kdv ehq  
sur sdj dvng el z dvnu frqvœp lqdvng  
z lvk idhf do p dvnu/ kdv dwdfn hg  
prwvuhq vkrv dylqj lq œz dgg  
furz ghg srwvraqv ri flvhw/ kdv  
sur gxfhg lq lw ylvv v dœ vkh  
v| p svrp v dgg uhvœv ri vœv  
fkr dhd/ dgg lv vkhuhruh/ lq rxu  
rslqlraq/ qr vqlqj hvv vkw d fkr dhd Ô  
^53`

Vqfh lw lv qrz fœduj  
xqghuvrg vkw frqvœp lqdvng  
z dvnu lv vkh ykldh prw rivng  
dvrfdvng z lvk fkr dhd v  
vdqv lvrq/ vkh vœv ri  
Flqflqqdvr vdvqvraq lq 4;:6 kdg d  
gluhf wehdulqj rq vkh klw ul ri vkh  
4;:6 hslghp lf1 Vkh riilfldo Txlqq  
uhsruw dvng vkw dvvkh vlp h ri vkh  
rxvœvri ri vkh glvhdv lq  
Flqflqqdvr Ôkh wvhw dgg dahl v  
z huh fœdq/ dgg vkh flwv œz dv  
jhghudœ lq d idlu vdvqlv ul  
frqglvraq Ô^54` Vkh lghd z dv dœr  
surprvng vkw Ôkh z dvnu vxssd ri  
Flqflqqdvr œz dv, uhj dughg vdp raj  
vkh khdk lhwixuqvkhg dql flwv lq  
vkh xqlraq P^55` Vklv Ôkhdkl Ôflwv  
z dvnu/ iru vkh prwvduw z dv vnhq  
iurp vkh Rklr Ulyhu/ dgg vlv z dvnu  
z dv dvxphg w eh vdh iru lwz dv  
jdvkhuhg iurp vkh fkdqgho eh| rqq  
uhfk ri vkr uh gudlqj h1 ^56` Lq  
dgglvraq/ w ehvnu glwœv vkh  
flwv v z dvnu/ :; 6 k| gudqv/ dgg vl{

saxp ldxv ri qhz slshz huh hufvng lq 4; :6/ jlylqj Flqflqqdw 487 pldxv ri wvdo z dnu slsh1 lru vhz dj h sxusrvh/ vkh flv/ vlqfh 4; 8; / z dv glylghg lqv vz r vhsdudvnl glwulfw= vkh rqh dlqj z hww ri luhhp dq/ ehvz hhq Hlj kvk dqg Edqn/ dqg vkh rvkhu frp sulvqj vkdw srurq hdwv ri luhhp dq/ dqg dar vkdwz hwwri luhhp dq dqg vxvk ri Hlj kvk1 lq ervk lqvdaqhv/ vkh Rklr Ulyhu/ vkh vxufh ri vkh flv v z dnu vxssq/ z dv vkh ilqduhfhsvalfch iruvkh flv v xqvhdvng z dnu1^57

Dv z dv hvledvkhg vl{ |hdw suhylrxdq/ d ixw vlp h/ shup dqhqw erdug ri khdak z dv hp srz huhg w ryhuwh vkh flv x jhqhudo khdak dqg vdaqvwrq dqg el 4; :4 kdg glylghg vkh flv lqv vl{ khdak glwulfw1 W dvlwvkh erdug ri khdak/ lwz dv vkh Qxv ri vkh pdlru w ghvllouirp vkh uhj xadu srdfh ri vkh flv/ ru w pdnh qhz dssrlqvp hqw iruvkh sxusrvh/ vxfk qxp ehv ri srdfhq dv vkh erdug pdl uht xluh iruvkh hqirufhp hqwri surshu vdaqvduj p hdvuhv1^58` Vklv Qdqvduj vt xdg Qz dv lq vkh r u xqghu vkh h{foxvlyh frqwr ori vkh flv x erdug ri khdak1 Krz hyu/ gxulqj 4; :6/ vkh erdug x frqwr ori vkh vdaqvduj vt xdg z dv vdaqvihuug w vkh Erdug ri Frpp lwrqhuw ri Srdfh/ dqg hiilflhw hqirufhp hqw z dv dssduhqv1 σw1 Lwlv xqfdu z kl vkh vdaqvihu rffxuhg/ exwvkh srdfh frpp lwrqhuw glg qrw vxssruw vkh fhdqxs hiiruw dqg glvuhj dughg Erdug p hdvuhv1 l xwkhup ruh/ vkhuh z huh wr ihz sdwr q hq dvlj qhg dv vdaqvduj lqvshfw w vr dwn z dv dfvxdq df frp sdvkhg1 Vklv vlxvwrq vkr xj k glg qrw r xqfkdahj hg dwkh vlp h/ irufv v z huh ehj lqqlqj w vhh vkh qhng iru vshlilf hgxfvwr qdo t xddilf vwr qv iru vkr vh xqghuwlqj vdaqvduj lqvshfw vwr qv1^59` Surihwru P duf xv dqngh vklv dqg rvkhu Df hv

fulvflvp v w d qxp ehv ri srdvlf do lwxhv vkdw durvh lq vkh 4; :3v lqyrqlqj luhj xadlvhv lq vkh frp swr ahuv riilfh/ srdfh ghsdwp hqw erdug ri flv lp suryhp hqw dqg erdug ri hgxfvwr q1^5: `

Qhyhukhdw/ hyhq lq vkh idfh ri srdvlf do idfvwrq v dqg idloxuh/ ryhu 46/4: 7 qxlvdqfhv z huh uhsruvng gxulqj vkh hslghp lf |hdv lq dflv vkw dxusrvng w eh lq idlu vdaqvduj frqglvwr q1 ^5; ` Ehvghv sur edhp v lqyrqlqj frqwr ori vkh vdaqvduj vt xdg/ vkh erdug ri khdak dar vxiihug lq 4; :6 iurp d afn ri frshudvwrq z lvk vkh erdug ri vkh vhz dj h frpp lwrq/ dq hvhqvdo dj hqf lq vkh ghyhosp hqwri dq hiihfvlyh dqg fruglvng sxedf khdak srdf l1^5<` Lwz dv dar qrw xqvo 4; ;< vkw vkh flv uhrpp hqghg vkh frpsxur u frqqhfvwrq ri dæ krxvh w vkh p xqlf sdo vhz dj h vlvnp / d idfw vkw j undv khshg vkh erdug ri khdak x uhj xadlvwrq ri vkh glvsr vdo ri krxvkr qg z dnu1^63`

Vkh Flqflqqdw suhv surylghg dfvlyh fryhudj h ri vkh hslghp lf vkr xj krw lw frxuh1 Rqd gdj v dnu vkh iluw idvldv/ dqg lq dgydqfh ri pdqj lq vkh phglfdo frpp xqlv/ d uhsruw dsshduhg z klfk vdvng vkw Qkh glvhdv z dv sursdj dvng el vkh h{fuhp hqvo glvfkdj hv ri shwrqv diihfvng el vkh fkrduf srlvrqv/ dlghg el σfdo fdxvhv1^64` Vkh Gld J dhv z hqw rq w uhrpp hqg z krh vfdh sxuilfvwrq/ glvqihfvwrq/ dqg vdaqvduj fhdqvqj 1 ^65` Orfdo frqglvwrqv z huh rivng ylylgd ghvulehg dqg æp hqvng1 Uhsruw dsshduhg ghvuleqj qhj dfvng sulyhv/ ilok vrgghq j urxqv/ irxo fhædu/ sruj gudlqhg vxurxqglqj v/ irxo dqg revvxfvng krxvh gudlv/ ghfdlqj dqg

sxvfv hqwp dnu/ er vk dqj do dqg yhj hvledv/ dqg xqyhqv dvng/ gdp s/ furz ghg gz hæqj v1 Vxj j hwrqv iru krxvh fhdqvqj / vxfk dv vkh xvri txlfn dp h/ frdo vdu fduerdf dflg/ dqg z klv z dvk z huh flv xadlvng lru sulyhv/ vshlilf irup xadv iru glvqihfvwrq/ xvlqj hljkw w vng srxqgvri vxskdvri lru lq ilyh w vl{ j dæ qvri z dnu lq frp elqvwrq z lvk d slqwri fduerdf dflg z huh dar sxedvkhg1^66` Dv d shwr qdo klj lqfl dgylvru / vkh Gld J dhv vxj j hvng vnp shudqf/ sxuh gulqnlqj z dnu/ iuhv dqg vxewlvdo irrg/ uhv dqg edvklqj dvfkr dnd suhyhqvlyhv1^67`

Vkh Gld J dhv dar z duhg vkw Qz frqfhdo vkh idfvri vkh suhvqfh ri fkr dnd lv fulp lqdo dqg vkw dækrxj k vkh Qxv kdv frwexvlqhw p hq ri vklv flv vrp h prqh/ lwkdv vdyhg vkh dyhv ri pdqj rixufv hqv1^68` Lq vkh plgwri vkh hslghp lf/ vkh sdsu dar duxhg iru vkh lpp hglv frqqhfvwrq ri vkh flv v vhz huv dv d vns wz dugv lp surylqj vkh flv x sxedf khdak1 Krz hyu/ vkh J dhv ixwkh h{ædlqhg vkh undv q iru vkh kdskd} dug vhz dj h vlvnp dv ehqj Qz vkh srdf lq Flqflqqdw/ ehfdv vkh flv lv qrw z hæ uhj xadlvng1^69` Vkh suhv dar xvng lw sdj hv w uhp lqg vkh sxedf ri sdvfxadu suredp dndv/ vxfk dv vkh rshq vsulqj rq Orfn Vuhw ehvz hhq Vl{ vk dqg Hlj kvk Vuhw1 Kuh lq vklv ghqvhd sdfnhg dqg lqvdoeur xv hvfvwrq ri vkh flv z dv d qhjl kerukrrg z kuh vkh fkr dnd hslghp lf ri 4; 99 z dv xæp dvng vdf hg1^6: `

Vkh jhqhudo vdvri Flqflqqdw v krxvlqj lq 4; :3 z dv uhj dughg dv ghsæ vledh1 W ixwkh frp sdfv vkh lwxh/ vkh flv z dv nqrz q dv vkh prw ghqvhd srædvng lq vkh frxqv shvtxduh plch1 Flqflqqdw kdg 4/743 vng hq

krxvhz klfk z huh hdk krp hw vl{  
rupruh idp ldhv/ dgg prwri vkhvh  
exlqaj v z huh vhuhg el d vlqj dh  
suly|1 lruw/ shu fhqw ri vkhvh  
idp ldhv dyhg lq rqh urrp/ dgg  
hlj kw/ Okuh shufhqwri vkhvh urrp v  
kdg exwrqz lqgrz 1^6;` Xqghu  
vkhvh frqglwrqv/ 8/333 suly| ydxaw  
z huh ghfaduhg qxlvdqfv lq 4;:61  
Vkh srweldvhw iru lqihfwrq iurp  
vkh lœ frqvalqhg dgg kdskd}dug  
glvsrvdo ri kxp dq z dwh z huh  
reylrxv1 Vklv uhddv/ z dv uhdfvng  
lq vkh idfw vkw 475 rxw ri  
Flqlqadw^v 53: fkrchud ghdkv/ ru  
vl{v/ Qlq shufhqwrffxuhg lq vkh  
vnhqphqw vhwqj z lvk gxelrxv  
vdqlvdl dp hqlvhw/ z klch rqq 55  
ghdkv ru 44( z huh uhrughg lq vkh  
flv/ vkrvslvda/1^6<

Lq p hglfdo vhw v/ vkh ofdo  
vkhudslhv iru fkrchud^v vhdvphqwlq  
4;:6 ydulhg dwh lq vxewdqfhiurp  
vkrvh xvng lq hduhu hslghp lfv1  
Dokrxjk suhvulsvyh grvdj hv  
fkdaq hg ryhu vlp h/ d  
frp elqdwrq ri hp hlv/ v/  
qdurvlv/ srlvrqv/ dgg  
dqv/ vsdvp rgdœ z huh  
hp sœ|hg1 Grfw w  
frqvlqxhg w surfœlp  
vkhlu vxffhwhv/ rq d  
fdvh el fdvh edlv/ lq  
vkhpdqj ri vkhphglfdo  
mxuqdœ ri vkh shurg1  
^73` Vkh vxewdqfhw  
prw rivng p hqwrqhg  
lqfœghg= lshdf/ dfrqlv/ vlqdsivp /  
pruskl/ txlqlq/ fdp skr u/  
fdœp hœ dvr skld/ dgg elvp xvk1^74`  
Vkh vhuixv sur edhp ri ghk| gudwrq  
lq fkrchud fdvh z dv j hqhudœ qrw  
p hglfdœ dgguhvhg> krz hyhu/ vkh  
4;:6 hslghp lf glg z lvqhw d vhw lq  
vkh xvri vkh k|srghup lf vlqj h  
dv d ghdyhul dj hqw iru suhvutehg  
p hglflqh1 Ehlvghv skdup dfhxvfdœ/  
sk|vfdœ skhqrphqd/ vxfk dv  
hdfvulflv/ z huh vrp hvlp hv sxw  
iruk dv fkrchud fxuhv1 Dv rivng z dv

vkh fdvh lq vkh sdw/ fkrchud ylvlp v  
kdg w frqvhgg iru vxuylydoqrwrqd  
z lvk vkh udydj hv ri vkh glvhdv/ exw  
dœr z lvk vkh plqlvudwrqv ri vkh  
grfw w1 Dokrxjk vkh pldvp d  
hvrœj| z dv vhdglœ œvlqj jurxqg  
w vkh plfurvfrsh dgg j hup vkhru /  
p dqj grfw w lq 4;:6 vkw irœz hg  
vkh œdhg/ sxuj h/ sxnh/ dgg vz hvdœ  
vhdvphqwp hvkrgrœj|1

Dokrxjk vkh uhvraqv w  
vkh 4;:6 fkrchud rxvœudh pdj vhw  
srrud kdqgch/ dv z huh vkh  
uhvraqv w rvkhu z dvhu erug  
glvhdv vxfk dv vpskrig/ lw glg  
surgfxh vrp h srvlvvh uhvœ dv  
vhw lq vkh lqfuhdlqj ghp dgg iru  
ehvhu sxedf vdqlvwrq1 Z khq  
vdqvdvng lqwr frqfuhv sr dvlf do  
dfvwrq vkhuh z huh fœdu h{sdqvlrqv  
lq vkh uhjœdvul srzhv ri  
lqglylgxdo erdugv ri khdk erk  
œfdœ dgg qdvrqdœ 1Vyhudo| hdu  
ehiruh/ lq 4;9</ P dwdfkxvhw  
hvœdvkhg vkh lqlvdo sdvhuq ri

**Vkh j hqhudo vhw ri  
krxvlqj lq 4;:3 z dv  
uhj dughg dv ghsœrœdœh1  
Vkh flv/ z dv nqrz q  
dv vkh prwghqvh  
srœdvng lq vkh  
frxqvul 1Flqlqadw  
kdg 4/743 vnhqphqw  
krxvhz klfk z huh  
hdk krp hw vl{ ru  
p ruh idp ldhv1**

vhw khdk  
fruglqdvwrq dgg  
ryhumjkw ^75` Lq  
Dsuo4;:9 vkh Rklr  
J hqhudo Dwhp ed  
ilqdœ irœz hg vxlw  
dgg fuhdvng vkh iluw  
vhw erdug ri khdk  
z lvk dq dqxdo  
dssursudvwrq ri  
'8/3331 Lq vkh  
surfhw Rklr  
ehf dph vkh vkw/ vhfraqg vhw w  
kdyh vxfk derg|1

Vkh lpsruvdqfhiurp fœdq  
z dvhu vxssœ lq vkh sxedf khdk  
duhd z dv ilqdœ uhfrjql}hg lq vkh  
P dufk 47/ 4; <6 dp hqgp hqw w  
Rklr œ 4;:9 erdug ri khdk  
dj lvœvwrq1 Kuh lwz dv vdvng vkw  
œqr flv/ ylvœj h/ frusrudvwrq/ ru  
shvrq vkwœ lqwr gfxh d sxedf  
z dvhu vxssœ ruvlvhw ri vhw hudj h  
ru fkdqj h ru h{vng dql sxedf  
z dvhu vxssœ ru rxvhw ri dql

vlvhw ri vhw hudj h qrz lq xvhw  
xqdhv vkh sursvhw vrufh ri vxfk  
z dvhu vxssœ ru rxvhw iru vxfk  
vhw dj h vlvhw vkwœ kdyh ehq  
vxep lvng w dgg uhfhlyhg vkh  
dssurydo ri vkh vdwv erdug ri  
khdk œ ^76` lurp vxfk frqfhuq/  
uhjœdvwrq ri vhw hudj h vhdvphq  
sœdqw dgg j dœdj h glvsrvdo  
idfldvhw vrrq irœz hg1  
lqfrusrudvng dv sdw ri vkh 4;:9  
vhw erdug ri khdk dj lvœvwrq z dv  
dœr vkh uhdd}dvwrq vkwœ dffxudv  
vhwœ lgh vlvhw ri frœhfvrq/  
vdœdvwrq/ dgdq vl/ dgg  
lqvhuuhvwrq ri ylvdœ vdwvvlv z dv  
qhfhvduj iru hvœdvklqj surshu  
sœdqqlqj dgg surfhgxuhv lq sxedf  
khdk srdflhv1

Flufxp vdwqfv lq vkh  
qlqhvnhqv fhqvu dœz hg iru wr  
pxfk œfdo ydulqf/ dgg vkw  
frqvlœvng w dq xqfruglqdvng  
dssurdfk w fulvh fœdvng el  
hslghp lf glvhdv1Hyhg vkrxjk vklv  
slfh ri dj lvœvwrq vdz dq hduj  
qhng irufrp sukhqvlyh khdk gvd  
frœhfvrq/ dfrpsœvng vdwvdfvul  
vlvhw ri ylvdœ vdwvvlv  
surfxuhp hqw glg qrw p dvuod}h  
xqvo sdvdj h ri vkh Rklr Ylvœ  
vdwvvlvœdœ ri 4<3; 1^77` Lvdq eh  
dijxhg vkwœ lq j hqhudo fkrchud  
hslghp lfv dgg vkhlu ghvwxvlyh  
lpsdfw rq œfdo frppxqlvhw  
surylghg d fulvfdœ lqlvdo  
p hfkdlvp iru vkh uhjœdvul  
vhwgv œvhu vhw lq vkh Surj uhvlyh  
hudœ hduj vz hqvlhv fhqvu vhdvfk  
irurughul

Fkrchud^v julp dgg ghdg  
duyldokhœhg frppxqlvhw ehj lq w  
h{dp lq vkhlu vrlvdœ ideulf1 Vkh  
dvrqv dduhg frqfhuqlqj vkh  
uhœvwrqvks ri glvhdv w  
lp sryhuvkhg xœdq frqglwrqv  
vkrxjk z huh qrw vœœ xqghuvrg  
dgg dfvng xsrq xqvo vkh vz hqvlhv  
fhqvu 1 Qhyhvkhdvhw/ lq vrp h  
surj uhvlyh p hglfdo dgg srdvlf do





# G h q j x h l q G x u e d q / 4 < 5 : =

W k h P d n l q j r i d S x e d f K h d o k F u l v l v

S k l d s G 1 U r w y

E r v w q X q l y h u v l w y J u d g x d w h V f k r r o r i D u w ) V f l h q f h v

**R** q Q h z \ h d u x G d l 4 < 5 : /  
 v k h h g l w u l d o s d j h l q  
 G x u e d q x d n d g l q j  
 q h z v s d s h u / z d u q h g r i d q  
 h s l g h p l f l q s u r j u h w = Ö r u z h h n v /  
 i r u p r q v k v s d w l w k d v j d l q h g l q  
 v h u l r x v q h w Ö d a g Ö l a o g r x e v d h v  
 u d j h i x u l r x v d v k u r x j k r x w v k h  
 k r d g d l v Ö 4 V a q f h v k h e h j l q l q j  
 r i v k h F k u l w p d v v h d v r q / p r u h v k d q  
 9 / 6 3 3 k r d g d l p d n h w g l v h p e d u n h g  
 i u r p w a d l q v i u r p v k h l q v h u l r u /  
 d d j k v l q j l q v k h v h d v l g h w z q  
 p x q l f l s d o e r r v h w w x v h g d v Ö k h  
 E u j k w q r i V r x v k D i u l f d Ö 5 V k h  
 Q d v e l o P h u f x u l x h g l w u l d o z u l v h w  
 f r q i h w h g = Ö R x u y l v l w w r x j k w w  
 k d y h e h q z d u q h g / Ö e x w Ö h y h q v k h  
 S u h w / z k r v e l a n h g x g d d e r x w v k h  
 v p d a s r { / k d y h e h q v l d q w  
 u h j d u g l q j v k h F k d u h w r q h s l g h p l f Ö  
 Ö Ö k h u h y h u v z r r u v k u h d a g d  
 j u d p r s k r q h d u h j d v k h u h g w j h v k h u  
 v k h g l v h d v h p d l e h v h q l q l w p r w  
 y l u x d h q w i r u p Ö 6  
 D f h v r

W k h p h a s k r u r i h s l g h p l f  
 l a o q h w z d v u l s h i r u x v h l q G x u e d q /  
 z k h u h v k h v k u h d w r i z l g h v s u h d g  
 g l v h d v h z d v d y h u l u h f h q w p h p r u l 1  
 E h j l q l q j l q p l g Ö R f w e h u 4 < 5 9 / v k h  
 g l v f r y h u l r i v h y h q f d v h v r i  
 i u h t x h q v d i d v e l o v p d a s r { Ö d p r q j  
 v k h p r w i h d u h g f u r z g g l v h d v h  
 i u r p H x u r s h Ö s o x q j h g u h l g h q w  
 d a g p x q l f l s d o d x v k r u l v h v l q w d a  
 h l j k v e h h n s x e d f k h d o k f u l v l v 1  
 D j j u h w l y h p h d v x u h v w a p s h g r x w  
 v k h v p d a s r { v k u h d w e h i r u h  
 F k u l w p d v / e x w q r w e h i r u h Ö r p h 9 3  
 f d v h v Ö d a g 4 8 g h d v k v r f f x u h g Ö  
 d a p r w h { f a x v l y h d d p r q j v k h  
 w z q x l a g l d q u h l g h q w 1 Ö 7 R a f h  
 v x e g x h g / k h d o k d x v k r u l v h v v k l i v h g  
 i u r p s u r v h f v l q j v k h s x e d f w  
 s u r v h f v l q j s r f n h w / l w x l q j  
 w a d v h p h a w v k d w G x u e d q z d v d i h i r u  
 w a d y h d u w v h h n l q j v x q d a g v h d Ö  
 d a g v k h l u f r y h v h g s r x a g v d a g  
 v k l a d q j v 1 S x f n l v k d i u d p l a j v k h  
 s r s x a d u l w y r i v k h F k d u h w r q l q v k h

a d q j x d j h r i d s x e d f k h d o k f u l v l v  
 f d a h g w p l a g v k h 4 6 v p d a s r { 0  
 u h a d v h g h g l w u l d o v v k d w u h f h q v d  
 d s s h d u h g l q v k h v d p h v s d f h 1 Ö 8  
 S h u k d s v u h d g h w v k r r n v k h l u k h d g v /  
 f k x f n d g t x l h v d / r u h { k d d g z l v k  
 u h d h i d w k h f r p s d u d v l y h d j k v a h w r i  
 v k l v d i i d f v r q 1 D a h s l g h p l f k d g  
 e h q d y h u h g / q r Ö t x u r s h d q v x  
 f r q w a d f v h g v p d a s r { / d a g v k h  
 k r d g d l v h d v r q x p h u l p d n l q j d a g  
 p r q h l p d n l q j z h u h l q i x a o v z l a j 1  
 E x w z k l d h G x u e d q l v h v d a g  
 k r d g d l p d n h w g d a f h g / d a r v k h u  
 h s l g h p l f z d v e h j l q l q j w p d w 1  
 D v v k h f d d h a g d u w x u h g r y h u /  
 g h q j x h i h y h u w r n k r a g l q v k h  
 z d u p / p r l w f r d w e l o s a e l l q l q d a g  
 d u r x a g G x u e d q 1 D w r s l f d o g l v h d v h  
 f r q v l g h u h g v h p s r u d u l d g h e l d v a l q j /  
 e x w q r w g h d g d / g h q j x h l a i h f v r q v d w  
 i l u w z h a w x q q r v f h g / v k h q  
 x q u h p d u n h g / e x w q h y h u k h d w e x l a v  
 w h s l g h p l f v f d d h 1 D p l g v k h  
 v x p p h u r i 4 < 5 : x k h d y l u d l q v d a g

kljk khdw uhvlgqvw vwxjjdng w frqwr o vkh dngv h|sw prvt xlrv vkwvwdqvp lwghaj xh1 Rqd lq ævñ P d|/ divñu vkh duvdo ri z lqvñu vñp shudvuhv/ glg vkh hslghp lf vxevlgh1 Vxp p d| uhsruw lqglfdvng vkwvghaj xh Qdihfvng dq duhd h{ vñqglaj der xw73 p lñv iur p Gxuedq/Õ udvñg vkh æfdohfr qp | / dqg uhvxoñg lq Qdèrxw 83/333Õ hvñp dvñg fdvñv dqg 94 gluhfvñ dvñv exvdeh ghdkv1^9` lq frqvudvñv vkh vp dæsr{ rxvudñ/ vkh ghaj xh hslghp lf glvsursuwr qdvñv diihfvng vkh w z qæ v klñv uhvlgqwr1 Uhsruw revhuyhg vkwv Qdhdud` kðo ri vkh Hxurshdq srsxævñv ri Gxuedq z dv lqihfvng/Õ z klñv ghaj xh fdvñv lq vkh lqgl dqg Diufdq frppxqlvñv z huh hvñp dvñg dp raj Qd qd` der xwr qh0 vñqvñv ri vkhlu xqp ehv1^0` H{dfvñv ilyh prqvkv divñu p dñlqj djkwri Qd vkh Fkdudvñv Hslghp lf/Õ vkh vdp h hglvudòsdj h riihuhg qhlvkhu pluk qru phvæskru= Qd vñv r hslghp lf v ri vkh sdw vñv hõy h prqvkv kdyh jlyhq lw ^Gxuedq` d vrp hz kdwvgh vkrfv1^0`

Rq h w z q1 Hljkw prqvkv1 Vñv r yhu gliihuhqwg lvhdvñv1 Vñv r p dñhgq glvsursuwr qdvñv exughv ri glvhdvñv1 Vñv r sup dñd` diihfvng frppxqlvñv z lkv xqht xdvwæqglaj lq vkh udfh0vudvñv hñg vrfñvñv ri hduj vñv hqvñv fhqvñv Vrxvk Diufd1 Dqg r qh txhvñv r q = z kdw p dñv d sxedf khðak fvlvñv Vp dæsr{ z dv r qh1 Ghaj xh ehfdp h r qh1 Krz dqg z k|/ lq 4<5:/ z dv ghaj xh uhfrj q|}hg dv d vñv r xv vkuhdw dqg p dgh d qrvñv d eñ glvhdvñv E d vñg sup dñd` r q uñv l h z ri vkh gdlq hglvñv r qv ri vkh Vkh Qd vñv P hufxv ð khudvñv P hufxv / L dñv xh vkwvñv hslghp lf vñv vfdñv/ kxp dq vxiihulqj / dqg vkh sxedf fæp ru ri z klñv flvñv hqv/ frqvudvñg w vkh uhfrqvlgvñv r q ghaj xh1 Krz hyhu/ suhvñvñv j r xq qhg lq vkrvñv hfrqrp lf ævñv dqg Gxuedqæv ñv h vñv lqg xvñv d vñv l vñv r qv z huh vkh dñdglaj uhdv r qv z k| khðak dxvkrvñv d eñ d q r qhg d ævñv/ ð dñv/ dñv vñv xq0 l w ð r xvñv vñv d fñv dqg uhfrj q|}hg ghaj xh dv d sxedf khðak fvlvñv

Gxuedq lq 4<5:

Lq 4<5: Gxuedq r ffxslhg d æfdvñv r ñv w z h w ri vkh lqgl dq Rfhdqæv vñv up p hg vkrvñv d qh dqg Df hv r

qrwk ri vkh w z qæv sul}hg kdueru ð l j xuh 4,1 Vkh v æfdvñv r Qd ehvñv hñg ehdfk dqg ed| Qd frqvudvñg w vñv hudo r yhuævñv lqj p xqlfñv d o lghqvñvñv= uhfvñv r q j r xqg/ vñv d qv s r u w ñv r q k x e/ dqg i dñv d q j l q g x v ñ v d o v ñ v 1 O r f d v ñ g r q v k h s u r y l q f h r i Q d v ñ o v x e v r s l f d o f r d v ñ o s æ l q / G x u e d q h q m | h g æ q j v x p p h u v d a g v k r u w p l a g z l q v ñ v 1 V k h w z q æ v i d y r u d e h f d p d v ñ / z d u p z d v ñ v / e u r d g e h d f k h v / d a g k r u w u d f l a j y h q x h v p d g h l w d s r s x æ u k r d g d | g h v l q d v ñ r q i r u z k l v ñ v i u r p V r x v k D i u f d æ l q v ñ v r u g x u l a j v k h F k u v ñ p d v v h d v r q / H d v ñ v u e u d n / d a g v k h v r x v k h u q k h p l v s k h u h ð v ñ q h 0 v 0 D x j x w z l q v ñ v 1 ^

Iurp vkh Erurxjk ri Gxuedqæv irxqglaj lq 4; 87/ vkh w z qæv irvñvñv z huh vñvñg r q lw survñvñg kdueru dqg lw f d s d f l v ñ w z h ð r p h v k l s s l a j 1 G x u e d q z d v z h æ v l v ñ d v ñ g d æ q j h v ñ e d v k h g v ñ d g h u r x v ñ v 1 R q V r x v k D i u f d æ h d v ñ v u q f r d v ñ v v k h w z q z d v i d y r u d e d s r v ñ v r q h g i r u v d g h z l v k v k h l q g l d q v x e f r q v l q h q w v h d v ñ i i l f f l u d d a j D i u f d y l d v k h V x h } F d q d ð d a g H x u r s h d q y h w h v u r x q g l a j V r x v k D i u f d e r x q g i r u D x w u d d / i r u z k l f k v k h V x h } u r x v ñ s u r y l g h g q r d g y d q v a j h 1 ^43` Z l v k f r d o d u l y l a j e l u d l o i u r p | x o æ a g g / G x u e d q æ v k d u e r u z d v d q h v h q v ñ o u h ð r d d a j w s g x u l a j v k h d j h r i v ñ d p v k l s v 1 E l 4<5:/ v k h u d l æ d l v k d w z h q g h g l w z d l x s r y h u v k h h v f d u s p h a q w k d g e r æ v ñ v u h g G x u e d q æ v l j q l i l f d q f h d v d v ñ d q v s r u w k x e i r u v k u h g h f d g h v / f r a q h f v a j v k h w z q æ v g r f n v w v k h æ f u d v ñ y h p l q h v d a g e x j h r q l a j f l v ñ r i M k d a q h v e x u j æ f d v ñ g p r u h v k d a q 833 n p l q a d a g 1

Gxuedq kdg æqj ehq d fræfvñv r srlq w dqg surfvñvñvñv fñvñv i r u d j u f x o x u h s u r g x f w j u r z q r q Q d v ñ o v x e v r s l f d o f r d v ñ v h v s h f l d a j v x d u r 1 ^44` E x w g x u l a j v k h l l u w Z r u a g Z d u / i x u k h u l q g x v ñ d d } d v ñ r q e h j d a w r f f x u / d æ k r x j k v k h p d a x i d f v u l a j v h f w u u h p d l q h g v p d a d 1 ^45` Z k l ñ v w z q d ñ d g h u v d a { l r x v d } g h v l u h g p r u h l q g x v ñ v Õ d a g r i i h u h g d v x s h u r u s r u w d a g f r p s h v ñ v y h z d v ñ v d a g h d f v l f l v ñ u d v ñ v Õ v r p h l q g x v ñ d d v w f k r v h r v k h u æ f d v ñ v q v

ehfdxvñv æd qg z l v k l q v k h E r u r x j k z d v v f d u f h d a g h { s h a v l y h d a g p x q l f ñ s d o u d v ñ v z h u h k l j k 1 ^46` L q 4<5:/ G x u e d q æ v v ñ a g l a j d v d a l q g x v ñ d o f h a v ñ u l q l w r z q u j k w u h p d l q h g p r u h d v s l u d v ñ r q v k d a u h d } d v ñ r q 1

Srsxævñg el 456/333 shrsdñ/ vkh Erurxjk z dv ghqvñd vñvñg/ khpp hg0q el vñvñv d o r i q d v ñ u d o i h d v ñ u h v = v k h r f h d q w v k h h d v ñ v v k h w s r i v k h E h u d U l g j h w v k h z h w ñ v k h X p j h q l U l y h u w v k h q r u k / d a g v k h k d u e r u d a g X p e l æ U l y h u w v k h v r x v k ð l j x u h 4,1 V k u h h s u p d u j j u r x s v r i s h r s d ñ p d g h v k h l u k r p h z l v k l q v k h f r q i l q h v r i v k h E r u r x j k l q 4<5: = ð æ u r s h d a v x ð 8</933,/ l q g l d a v ð 54/5; 9,/ d a g D i u f d a v ð 75/433,1 V k h p d ñ u l v ñ r i ð æ u r s h d a v x z h u h r i H a j d v k e d f n j u r x q g Õ d æ k r x j k v k h l q f u h d v l a j s u h v h q f h r i ð æ r r u z k l v ñ v x z d v d a { l r x v d } q r v ñ g 1 P d a j d y h g r q v k h v h d ð d f l a j v l g h r i v k h E h u d U l g j h r u r v k h u h d y d v ñ g v æ s h v 1 ^47` V k h l q g l d a f r p p x q l v ñ v f h a v ñ u h g r q v k h i æ v ñ a d a g q h d u J u h l V ñ v h w r q v k h z h w ñ v u p d u j l a v r i v k h w z q f h a v ñ u l 1 ^48` ð æ u d f n v x q h d u v k h X p j h q l U l y h u w v k h q r u k / z h u h k r p h w p d a j i r u p h u l q g h q v ñ u h g l q g l d a æ d e r u h w 1 D i u f d a v d y l a j l q v k h E r u r x j k z h u h p r v ñ p d ñ z r u h u v h a j d j h g l q f d v ñ d o æ d e r u / æ x q g u l e x v l q h w h v / u l f n v k d z u x q l a j / d a g f r q v u d f w z r u n 1 ^49`

Dqr vñvñv 433/333 shrsdñ dyhg lq vkh vñvñv shu0æd q duhdv dæqj vkh Erurxjkæv erxqgdñv1 ^4: ` Z klñv vkh Gxuedq W z q Frxqflodag lw p xqlfñv d o k h ð a k g h s d u p h a q w r s h u d v ñ g z l v k l q v k h E r u r x j k / v k h j u h d v ñ u G x u e d q

duhd dqg vkh srsxævñv r q fñvñv r q v k h f r d v ñ o s æ l q w v k h w z q æ v q r u k d a g v r x v k z h u h d g p l a l v ñ v u h g e l d s d v ñ k z r u n r i d g p l a l v ñ v u d v ñ y h ñ v u l v g l f v ñ r q v 1 L q h d f k r i v k h v ñ v h q s h u l 0 æ d q g l v u l f w / E r d u g v r i O r f d o D g p l a l v ñ v u d v ñ r q d a g S x e d f K h ð a k z h u h v k h u h v s r q v l e d h q v ñ v ñ v 1 V k h Q d v ñ y h u h v u y h v / x k r p h w d æ l j h s r u w r q r i D i u f d a v l q v k h s u r y l q f h / z h u h x a g h u v k h d g p l a l v ñ v u d v ñ r q r i v k h Q d v ñ y h D i i d l w G h s d u p h a q w d a g l q v r p h v h w l a j v l a f o x g h g p l v ñ r q d u j p h g l f d o s u h v h q f h 1 l l a d a / v l a f h v k h j r y h u d q f h

wdf lqj / t xduqvwqh/ dqq ydfflqdvw q  
ehj dq vkwgdj dqq frqvwxhg xqwo  
vkh æwfdv fnduhg hj kw z hnv  
ævhu1 Vkh vkundwri vp dæsr{ sxw  
vkh p dklqhu ri fulv t xlfnd lqw  
p r v r q1

Lq frqvudw/ ghvslv  
hslvrghv ri ghaj xh0nh læghw lq  
4; <9/ 4<35/ 4<47/ dqq ævñ vkh  
suhylrxv vxpphu/ z khq ghaj xh  
ihyu dsshdug lq dqq durxqg  
Gxuedq lwz hqwxquhp dunhg lq vkh  
P hufxuj iruvhyhq z hhnv1^59` Lq dq  
lqvhuylhz lq ævñ Mlqxdj 4<5:/ Gu  
Sdun Urw/ ri vkh Xqlrq Khdoak  
Ghsdwp hqw qr vng Ôd frqvlghudeh  
dprxqwri ghaj xh/Ô vhhp lqj d w  
glvshoz ruulhv vkdwuhf hqwlqf undvhu  
lq vkh lqf lghqfh ri ihyu lqglfdvng d  
jdvkhuqj hslghp lf ri lqioxhq}d1  
^5: ` Vkh qhz v vkdw lqioxhq}d fdvhu  
z huh ihz dqq p lq z dv d vj qlilfdq  
dvxudqfh dhw vkdq d ghfdgh divhu  
vkh 4<4; lqioxhq}d sdqghp lf  
fælp hg 633/333 dyhv lq Vrxvk  
Diulfd1 ^5; ` Xqvr xedng el vkh  
suhvqfh ri ghaj xh/ Urw uhyhdng  
vkdwfdvhu kdg ehq uhsruhg lq vkh  
duhd ehru Fkulwp dv/ dqq æfd}hg  
Ôhslghp lf vÔ kdg rffxuhg lq vkuh  
frppxqlvhu rxwlg Gxuedq/ hdk  
æfdvng dæqj d gliihuhqvwadq dqh  
dndylqj vkh Erurxjk1 ^5<` Vkh  
sulpdj phvdjh iurp khdoak  
dxvkrulvhu z dv hp skdv}hg z lvk d  
æljh vxevvñ= ÔQr Fdxvh iru  
Dæup Ô^63` Lq hduj 4<5:/ ghaj xh  
z dv d qxlvdqfh/ qr wd vkundv

Vkhuh duh vhyhudo uhdvrqv  
z kl khdoak riilfdov lq Gxuedq glg  
qrwlqlvadq frqvlghu ghaj xh Ôdxvh  
irudæup Ô Prvwlj qlilfdqv Ô dv  
vkh lqglylgxdo dhyho Ô doakrxjk  
vrp h vxiihuhv h{shuhqfhg Ôhyhuh  
survudv q dqq gheldv/Ô ghaj xh  
z dv Ôhærp idvdÔ^64` Lq vkh hduj  
vz hqvhu vk fhqvud/ prw ghaj xh  
lqihvrv qv wrn rqh ri vz r irup=  
hvkhu d plq/ qrqvshlilf iheulh  
læghv rivng lqglwqj xlvkdedh iurp  
rvku ihyhu/ ru vkh pruh vhyhuh  
Ôævlfdo ghaj xh1^65` Vkh pruh  
vhyhuh irup/ z klfk rffxuhg dhw  
iuhxhv/ hduqhg vkh glyhdv vkh  
qdp h Ôeuhdnerqh ihyhuÔ iru lw  
lqvhuqh h h0rfnhw p xvdh/ erqh/  
dqq mlqw sldq1 ^66` Yrplwqj/  
vz ræh q d p sk jæqgv/ dqq udvk  
z huh dæv frpprq dqq/ dnh vkh  
ihyhu/ vxvda uhrvghg z lvkld  
z hhn1^67` lxæv frqyddv hqfh frxæ  
vdh Ôvkuh w irxuz hhnÔdqq z dv

I LJ XUH4=P DS ri GXUEDQ iurp durxqg 4<631Vkhgdunhqhg vsdfhlv vkh  
Erurxjk ri Gxuedq1 Vkhvxurxqglqj duhdv duh vkhshu0æuedq glwulf w

vwxfvuh iru vkh Xqlrq ri Vrxvk  
Diulfd glg qrw lqfoxgh vkh  
hwædvkp hqw ri surylqldo khdoak  
dxvkrulvhu/ vkh qdvraqdo Xqlrq  
Khdoak Ghsdwp hqwz dv uhsr qvledh  
iruvkh surylqfhæ uxododhdv1

Fulvlyv1Qxlvdaqfh

Edvhg rq lw æqj klwvuj ri  
ghydwvrv lq Hxursh dqq shulrgf  
hslghp lf v lq Vrxvk Diulfd/  
ehj lqqlqj lq vkh 4: 33v/ vp dæsr{ Ó  
frqvaj lrxv/ vsuhdg iurp shurq0w0  
shurq/ dqq sr vngvldæ idvdÔ z dv  
d sxedf khdoak fulv r q gdj r qh1  
^4; ` Vkh glyhdv kdg qrfxuh/ vsuhdg  
sulpdj vkrxjk vkh h{kdævrv qvri  
vlp swp dvf vxiihuhv/ dqq næng w  
xs w 63( ri shrsh lqihfvng1^4<  
Vp dæsr{ z dv dq læghv w eh  
suhvqvhg/ prqlvuhg/ dqq  
dj j uhwlyhq frpedvng1^53`

Vkh vdfvfv dqq wræ w  
suhvqvw dqq ilj kw vp dæsr{ z huh  
z hæ hwædvk hg dqq kdg vkh irufh

ri æz = frpsævuj qrvilfdvrv q ri  
dqj vxslflrxv fdvhu/ lrvævrv q ri  
lqihfvng shurqv/ wdf lqj ri dæ  
frqvdf w/ phglfdo revhuydvrv q ru  
txduqvwqh/ dqq ydfflqdvrv q ri dæ  
lqidqv ehru 46 prqvkv/ fklæuhq  
dqq dgxæv hyhuj ilyh |hdv/ dqq  
xqydf lqdvng shurqv lq dqq  
durxqg d frqilup hg rxvæuhdn1 ^54`  
Lq plg0Rfwehu 4<59/ lw z dv vkh  
qrvilfdvrv q ri d srvedh fdvhu ri  
vp dæsr{ vkdwsvrpsvng væli iurp  
Gxuedqæv pxqlf sdo Khdoak  
Ghsdwp hqw w ylvw vkh lqglq  
Eduudfv dw Xpjhl Ô z khuh  
urxjk d 933 shrsh uhvghg lq fæv  
txduvhu1^55` W vkhlu glvdj/ vkhj  
glvfryhuhg Ôhyhq ghilqlv fdvhuÔ  
^56` V{ lqglq uhvghqvw dqq rqh  
Diulfdq z huh læ dqq kdg ehq  
vlp swp dvf dqq lqihvrv xv iru dw  
dhdvd z hhn1^57` Vkh vxevvñv lq  
Vkh Qdvdp hufxuj wæ vkh wvuj =Ôæ  
irudhdvd z hhn>srdfh jxdug rq  
lqglq eduudfv>gdqj hu ri ixvuh  
vsuhdg Ô ^58` Lrvævrv q/ frqvdf w

p dunhg e| uhfxuuhqwdfkhw/ j hqhudo  
z hdnqhw/ dqg vxssuhwng dsshwln1  
^68` D aej h ghaj xh hslghp lf frxag  
fulssch d flwv Ó exwz lghvsuhdg  
ghdtk z dv qrwirxqg lq lw z dnh1  
^69`

Wkh vhrqg dqg vktug  
uhdvr qv ghaj xh z dv qrwfrqvlghung  
d klj kóthyho vkuhdwduh irxqg dwvkh  
sraxadwrq dhyho dqg kdyh w gr  
z lvk vkh vhyhulwv dqg iuhxhql/ ri  
hslghp lf ghaj xh1 Sdww ghaj xh  
hslghp lf lq Gxuedq gr qrwdssdu  
w kdyh ulvhq w vkh dhyori fulvl1 Lq  
4-5: / qrqh ri vkh vsfllilf uhihuhqfhv

lq vkh P hufxul w vkh  
4-47 ghaj xh  
hslghp lf fdaw lw d  
fulvl/ ruvsduh lqn w  
ghvfuleh lw w aol ^6: `

**Uhsruw ilong di vnu  
vkh hslghp lf hwp dng  
vkdwghad rqlq  
vz r Óxurshdqvxdg  
frqwdf vng ghaj xh/  
z klch shukdsv r qh  
lq vng Lqgl dqv dqg  
Diulf dqv ehf dp h l aol**

P ruhr yhu/ mxuqddwv  
dqg dhvhu z ulvhu  
vxssq lqj h{ dp sdv  
ri vhyhuh prvt xlw 0  
eruqh glvhdv uhfdahg vkh 4-38  
p daul d hslghp lf udvku vkdq vkh  
adwylvlvdlwrq ri ghaj xh1 Wkh lwxh  
ri iuhxhql/ dvr sz hulg vkh  
sululwv dhyho iru ghaj xh1 Mqfh  
shrsch lqihfvng e| vkh ghaj xh yluxv  
z huh j hqhudo/ lp pxqh w ixvuh  
dwafnv/ hslghp lf vxvda/ rffxuhg  
dwlulh xadu lqvnuydvr d ghfdgh ru  
pruh lq qrqthqghp lf duhdv1 ^6: `

Ehfdxvh ghaj xh z dv Óhagr p idvld Ó  
kdg qrw suhlyrxvq fulssch vkh  
pxqlfssdwy/ dqg rffxuhg  
lqiuhxhql/ Gxuedq w khdak  
dxvkrulvhu dssurdfkkg vkh 4-5:  
ghaj xh hslghp lf dv vrp hvklaj w  
eh hqgxuhg z klch lwudq lw frxuh/  
udvku vkdq dq hslvrgh vkdw  
ghp dqghg dj juhvlv p xqlfssdo  
dfv1

Wkhuh lv rqh pruh fuxldo  
frqvlghudwrq=vkh prvt xlw 1 Wkhuh  
vklaj v p xweh suhvqww vudqvp lw  
ghaj xh=vkh lqvr gxfv1 ri vkh  
yluxv/ vxvda/ vkrxjk vkh suhvqfh  
ri dshurq z lvk dq dfvlyh lqihfv1 q>  
vxvhswech kxp dq krw> dqg vkh  
ihp dch dngv hj|sw prvt xlw v vkdw  
vudqvp lw vkh yluxv1 ^6<` Xqdnh  
glvhdv vsuhdg shurq0w Gshurq/  
dnh vp dssr{/ d p rvt xlw fdqqr weh  
vxerfvng w v rldofr qur op hdvuhv/  
qrulqvnuylh hg irud dvr i frqvaf w  
ri hyhu shurq lwdv elvng1

Wkh dngv hj|sw prvt xlw lv  
Ólj kd dgds vng w kxp dqv dqg  
xuedq hqylur qp hqwr1 ^73` Wkh  
vsfllhv dyhv lq ru yhu qhdu kxp dq  
gz hadaj v> vadyhav r qd vkr uw  
Df hvr

glwafhv> suihuv w ihhg r q shrsch>  
dqg vhnv eargp hda rnvw divnu  
gd| euhdn dqg dj dlq lq vkh hduj  
hyhqlaj krux/ z khq shrsch duh  
dfvlyh lq dqg durxqg vkhu krp hv1  
^74` Sur edeq w lqfuhdv lw fkdqfhv  
ri vxuylydovklv sdwlf xadu prvt xlw  
lv hdvlq glvuxsvng z khq vnlaj d  
eargp hda1 ^75` Wklv Óqvnuxsvng  
ihglaj Ó p hdqv vkdw vkh vdp h  
prvt xlw p dl elv vhyhudoshrsch lq  
vffhwrq w frpschv lw p hda Ó  
lqfuhdvaj vkh rssruvqlvhu iru  
yludo vudqvp lwlrq/ shukdsv w  
p xolsch shrsch lq vkh vdp h urp 1

^76` Ihp dch dngv hj|sw  
prvt xlw v ghsrvlvkhlu  
hj v Ó durxqg 433 dwd  
vph Ó lq frqvllqhu  
frpprq w pdq|  
krxvhv dqg | dugv=  
eduha/ guxp v/ jxvhu/  
exfnhv/ srw/ isz hu  
ydvhu/ sadq vdfhu/  
rag vhu/ dqg glv dughg erwv dqg

vlqv/ dv z haodv vuhkr dvr dqg z dvhu  
frachv1 rqlq irup hg e| vkh  
qrwkhv ri vkuhadq durxqg vkh  
krp h1 ^77` Lq vlv z dl/ ghaj xh  
suhvqvhg d pruh frpsch{ dqg  
survadfvng fkdahaj h vkdq vp dssr{1  
Z klch vp dssr{ uht xlung  
prvlydvaj vlqj ch dfw ri  
vxep lwlrq w ydfflqv1 Ó z lvk  
vkh edfvlaj ri frqvledch dqg ngj h/  
li qhfhdv Ó idflaj grz q vkh  
ihfxqglwv dqg dsshwln ri dngv  
hj|sw uht xlung d z krch vdv1 ri  
ylj ladafv r q vkh sdwri lqglylxdv  
dqg frp p xqlv1 \ hw z khq ghaj xh  
dsshuhg lq Gxuedq/ vkh krp h0  
gz hadaj qdvuh ri vkh yfvu  
prvt xlw frqvulxvng w vkh Gxuedq  
khdak dxvkrulvhu adwhj Odulh  
dssurdfk w vkh hslghp lf1 Z klch  
pxqlfssdo z run fuhz v vhdvng  
vz dp s| duhdv z lvk rlo w suhvqww  
vkh dqrskdhv prvt xlw v dvrfldvng  
z lvk p daul d/ vkh ilj kwaj dlqvwahgv  
hj|sw lq krxvhv dqg | dugv z dv  
iudp hg dv vkh uhsrvqvlv1 ri  
lqglylxdv Ó r xvkr qghv1 ^78`

Hp hj lqj Fulv

Ghsvlv Gu1 Sdun Urwv  
Mqxdul dvxudqfh vkdwghaj xh z dv  
Óqr fdxv iru daup/ Ó lqihfv1 qv  
frqvaxhg w ulv1 Rq l heuxduj 4-/  
vkh P hufxul ghvfuleh ghaj xh dv  
Ónslghp lf Ó lq vkh erurxjk/ exvkh  
qxp ehv ri fdvh frxag r qd eh  
uhsruvng dv Ó xp hur xv Ó ehfdxvh lw

z dv qrw d qrwildedh glvhdv1 ^79`  
Wkdv vxp p hu/ vkh uhp dundedh  
vsuhdg ri ghaj xh z dv dndq  
vsxuhg e| khdy| udlqv lq l heuxduj  
dqg P dufk vkdw nhsv euhglaj  
afdvrv qvilahg z lvk z dvhu/ dqg klj k  
vxp p hu vnp shudvuhv dsdwlf xadud  
gd| v ryhu 63EF, vkdw dndq  
txlfnhg vkh hj j Qaduyd0sxs d  
vadj hv ri vkh vsfllhv dihf| f d h1 ^7: `

Wkrv vdp h klj k vnp shudvuhv  
sureded dvr frqvulxvng w  
ghaj xh v vsuhdg lq dw dndw r qh  
rvkhuz dl/ e| vkrvnlaj vkh daj vk  
ri vkh yluxv lqfxedv1 r q shulg  
z lklq hdk prvt xlw Ó surylglaj  
pruh rssruvqlv iru dngv hj|sw w  
vsuhdg vkh yluxv vkrxjk  
eargp hda1 ^7; `

Gxulaj l heuxduj vkh sdvuri  
P hufxul dvlv dvr derxvkh ghaj xh  
hslghp lf z huh irfxvhg r q  
lqirup lqj vkh sxedf dqg frqyh| hg  
vkuh p hvdj hv= ghaj xh z dv  
suhyddqvw lq vkh Erurxjk/ dngv  
hj|sw prvt xlw v vsuhdg vkh glvhdv/  
dqg krxvkr qghv vkrxag hp s| hg  
dqv1 prvt xlw p hdvuhv w fxue vkh  
hslghp lf1 ^7<` Wklv dgylfh lqfaghg  
urxvqh qd lqvshv1 vkh krxvhv dqg  
| dugv iru euhglaj vlvv dqg  
hp sv1 lqj dq| z dvhu dqg fryhulaj  
z dvhu v vudj h z lvk d ghqv v fuhg ru  
dssq lqj d ad| hu ri rloru nhrvqh  
vkdw z rxag vlv dvr vkh z dvhu w  
nhsv prvt xlw ady d iurp j hv1 lqj  
r{ j hq1 ^83` Dgyhuwhp hqvw lq vkh  
qhz vsdshu uhdvng vkh jurz lqj  
suhvqfh ri ghaj xh lq Gxuedq1  
Sulqwdgv iru krxvkr qghv lqvshv lghv  
ehjdq w ylh iru fxvwp hu  
ghvshudv w ug vkhu krp hv ri  
prvt xlw v # l j xhv 5 ) 6, dqg d  
frdvlo uhvruw w vkh vrvk  
vsfllilfdaj vadj hvng ghaj xh  
vxiuhv/ surplvaj d afdv1 lq  
z klk vkh frxag uhfxshudv z lvk  
Ónyhu frp iru wdqg dwhv1 q1 ^84`

E| vkh p lggd ri P dufk/ dq  
hvlv dvv ri 8/333 ghaj xh fdvh lq  
vkh Erurxjk z dv isdvng lq vkh  
suhv dqg dq rshq dhvhu dgguhvng  
w Ó u1 dqg P u1 Krxvkr qghv Ó  
iurp Ó Ylfv Ó srlqvng v fraghg  
krp h0 gz hadv iru ad{ prvt xlw  
frqvur orq vkhu surshv/ hfkr lqj  
vkh khdak dxvkrulvhu vafv vkdw  
vkh ilj kwaj dlqvwahgv hj|sw z dv d  
p dvhu ri lqglylxdv lq l vdv1 dqg  
uhfrj ql| dqf h1 ^85` Krz hyhu/ z khq  
vkh iluw ri qlq ghaj xh Ó hvdvng  
hglwldov lq vkh P hufxul udq vkh  
qh{ w gd| / vkh qhz vsdshu uhdvkhg

eh| rqq vkh shwr qdo uhv sr qvleldw/ qduudwlyh/ redt xhq fulwfl}lqj vkh p xqlfIsddw/ e| ux|qj vkh Ôh|qghqf| lq GxuedqÔ w y|hz ghqj xh Ôur p d vr uwri idv d wsr lqwr ri y|hz / d v d vhdv r qdoi hyhuz klk/ li vkh w z q lv œfn| / z lœ f dxvh d wvñ vhdv xv lœ qhw d qg z lœ lq d q| hyhqw vrr q eh ryhuÔ^86

Vkh vdp h hglw udo w wxfn r q vkh fux{ ri vkh fulv lvœ xlvdqf h lwxh/ z kdw p l j kw eh f dœhg/ Ôkh ghqj xh sdu dgr{ œ Ôkh uh dœ xqir ux qd vñ v klqj der xw ghqj xh lv v k d w l w h i i h f w d u h q h l v k h u g d q j h u r x v h q r x j k w p d n h l w d q d œ d u p l a j g l v h d v h r u p l œ q h q r x j k w d œ z d q | e r g | w w h d w l w z l v k l q g l i i h u h q f h Ô ^ 8 7 K h u h d i v h u / l q f u h d v h g h g l w u d o s u h v x u h i h œ r q v k h p x q l f I s d d w / d v v k h s x e d f f r a y h u d w r q z l g h q h g w l a f œ g h p r u h v k d q v k h s h w r q d o d a g q h l j k e r u d u h v s r q v l e l d w h v r i k r x v h k r œ g h u 1 l u r p p l g P d u f k v k u r x j k P d j v k h P h u f x u j f u l w f l } h g v k h p x q l f I s d o K h d œ k G h s d u p h a q w i r u l q d f v y l v / d a g l q h i i h f w y h q h v 1 M w e h i r u h D s u d p x q l f I s d o k h d œ k d x v k r u l w h v d a q r x q f h g s r d f | f k d a j h v v k d w l q f œ g h g d s u r p l v h w p d n h g h q j x h d q r w i l d e h l œ q h v e h i r u h q h { w x p p h u / v k h w œ l l q l a j r i v f k r r d k l œ u h q w f d u j r x w d q w O p r v t x l w p h d v x u h v / d a g v k h s u h s d u d w r q r i d f r p s u h k h q v y h s u h y h q w r q s œ d q i r u v k h i r œ z l a j | h d u 1 ^ 8 8 ` E x w e h i r u h v k l v f k d a j h l q s x e d f w œ l q f h r q h l q v h f w f l g h e u d a g p r y h g w f d s l v œ d } h r q v k h s x e d f g l w d v l w i d f w r q z l v k v k h k h d œ k g h s d u p h a q w s d w l y l v / f d n y h u d œ f h g v k h l u d g v z l v k d v œ j d q h v k d w z d u q h g / Ô g r q r w z d l w i r u v k h d x v k r u l w h v w v œ n h d f w r q Ô + l j x u h 7, 1 ^ 8 9 ` V k h u h q p d n l a j r i g h a j x h l q w d s x e d f k h d œ k f u l v l v z d v x q g h u z d j 1

P dnlqj d Sxedf Khdœk Fulvlv

D frqvwœd w r q r i i d f w w p d g h g h a j x h d s x e d f k h d œ k f u l v l v l q 4 < 5 : 1 V k h p r w y l v l e d h r q h v z h u h v k h h s l g h p l f œ v f d d h d a g v x i i h u l a j 1 E j v k h e h j l q l a j r i P d j / v k h p x q l f I s d o k h d œ k g h s d u p h a q w h w l p d v h g v k d w 6 3 / 3 3 3 f d v h v k d g r f f x u h g z l v k l q l w e r u g h u 1 ^ 8 : ` E j M q h / v k h P h u f x u j h g l w w e h d h y h g v k h w x h i l j x u h z d v Ô r q v l g h u e d k l j k h u Ô ^ 8 : ` H y h q x a d g m w h g / v k l v w œ l w l f u h s u h v h q w d w œ j j h u l a j D f h v r

exughq ri glvhdv/ diihfwaj r qh lq ir xu uhv lghq w l q d e r u r x j k k r p h w 456/333 shr s d h 1 ^ 8 < ` D u h s r u w l q v k d w u d q l q v k h M x u q d o r i v k h V r x v k D i u l f d q P h g l f d o D w r f l d w r q v k d w | h d u f œ l p h g 7 3 / 3 3 3 f d v h v d v d f r q v h u y d w y h i l j x u h i r u v k h w z q r i G x u e d q d a g v x u r x q g l a j d u h d v / d a g

I L J X U H 5 = N R P R D g /  
I h œ x d u j 5 / 4 < 5 : 1

d v x e v h t x h q w l q v h u q d w r q d o g l v h d v h v x u y h l œ d q f h u h s r u w i l { h g v k h h w l p d v h g f d v h v r q v k h Q d v œ l o f r d w œ l o s œ l q d w d e r x w 8 3 / 3 3 3 1 ^ 9 3 ` V k h v h d u h h q r u p r x v q x p e h u 1

E h k l a g v k h v h h w l p d v h v z h u h v k h h { s h u l h a f h v r i f r p p x q l w h v d n h S x v œ d p œ K l œ v k d w u h s r u w h g r q P d u f k 4 w œ Ô v k h h s l g h p l f w l œ v h h p v w e h u d j l a j l q v k h g l w u l f v Ô d a g Ô v y l v l a j h y h u j k r p h l q w x u q Ô ^ 9 4 ` V k h i r œ z l a j p r q v k / G x u e d q œ d h g l a j D a j d f d a / D u f k g h d f r q K h | z r r g œ K d u l v s r n h v l p l œ d u j d e r x w v k h w z q /

I L J X U H 6 = E D C D D g /  
I h œ x d u j 5 / 7 / 4 < 5 : 1

u h p d u n l a j / Ô l g r x e w l i v k h u h d u h p d a j i d p l d h v l q v k h e r u r x j k v k d w k d y h h a v u h d h v f d s h g Ô ^ 9 5 ` l q p d a j k r p h v Ô z k h u h v k h e d w h z l v k d h g h v h j | s w r y h u i d v k d a g e œ r g s œ l h g r x w Ô v k h h { s h u l h a f h r i d q h z v s d s h u f r q v l e x w u / Ô P r v k h u Ô f r x œ g k d u g d k d y h e h q x q l t x h = Ô d w r x u k r x v h / z h d u h l q v k h v k u r h v r i g h a j x h = v k h v r q r i v k h k r x v h / v k h f r r n r i v k h k r x v h / d a g d y l v l w u d œ œ l g œ z P œ ^ 9 6 ` l r u p d a j / v k h k r p h z d v q r w r q d d n h l v l v r i l q i h f w r q d a g d i i d f w r q / e x w d a v d v l v h r i i d l œ u h / i u x v w d w r q / d a g e œ p h 1 V k h œ p h a q w r i r q h k r x v h k r œ g h u z d v s u r e d e d z l g h d h f k r h g = Ô l k d y h x v h g N R P R ^ d e u d a g q d p h l q v h f w f l g h ` j d œ u h / d a g l q v s l v h r i v k l v / r q h e j r q h / z h k d y h j r q h g r z q z l v k l w + i y h x s w g d v h , Ô ^ 9 7 ` V k h v f d d r i v k h 4 < 5 : g h a j x h h s l g h p l f k h œ h g p d n h l w d s x e d f k h d œ k f u l v l v

V k h p x q l f I s d o k h d œ k g h s d u p h a q w f œ l p h g Ô k h y d w p d m u l v / r i f d v h v Ô z h u h p l œ q h q r x j k v k d w Ô r q i l q h p h a q w w e h g z d v q r w q h f h w d u j i r u p r u h v k d q v z r r u v k u h g d j v Ô d a g r a q d Ô d v p d œ s h u f h a q v œ j h Ô z h u h v h y h u h 1 ^ 9 8 ` l i r œ w 4 3 ( r i h w l p d v h g l q i h f w r q v z h u h v h y h u h / v k h q 7 / 3 3 3 0 8 / 3 3 3 s h r s d h r q v k h Q d v œ l o f r d w p h w z l v k f r a q l g h u e d h v x i i h u l a j 1 R q h v x e p l w r q s x e d v k h g l q v k h P h u f x u j l q D s u d h p s œ | h g d g h v f u s w y h d v h u d u j d s s u r d f k w g h v f u l e l a j l q i h f w r q / x v l a j s h w r q l i l f d w r q w f r a y h l v k h h { s h u l h a f h r i v h y h u h g h a j x h =

D v n l q a j k d a g j u l s v | r x d w k h e d f n r i v k h q h f n 1 V œ z d v k h i l a j h u w s u h w v k h p v h y h v l q w | r x u f u d q l x p 1 1 l u h v h p v w e x u w i u r p h y h u j i l a j h u m s 1 V x g g h a q / d v v k r x j k e j d j k v œ l a j i œ v k / v k h v k r r w d a g g d a f h v r p h g h p r a l f d o g d a f h d œ r a j | r x u v s l q h 1 V k h l f h d a g i œ p h d q v œ j r a l } h h œ f k v k h u l q | r x u e d f n 1 l q v k h g œ u n g h w v k d w k d v i d œ a j | r x w œ x j d h w u h œ l q | r x u e d f n e r q h 1 L w l v r i q r d y d œ V k h e r q h / z k l f k d v e h t q | r x u f k l h i w œ l l q d i h / f u x p e d v d a g u h x v h v w p d l q v œ l q | r x / h y t q l q d u f x p e h a q w s r v l w r q 1 ^ 9 9 `

Z k l d h v h g g l a j w z d u g p h œ g u d p / v k l v g h v f u s w r q f r u h v s r a g v w v k h u h s r u w r i r q h G x u e d q g r f w u v k d w s d w h q w v h d u x œ j w œ g k l p v k h l i h o v d n h v k h l z h u h e h l a j v k u d v k h g 1 ^ 9 : ` X a g g h u v k h v h f l u f x p w œ l q f h v / e r d u g l a j k r x v h n h s h u w z h u h

fulwfl}hg iru dndylaj vxiihuhv dā qh  
Ōru gdlv zlvkrxw uhfhylaj  
dwhqvr qŌ dāg vkh dufkgdfrq  
revhuyhg vkdw ghaj xh  
Ōryhuexughqhg shrsch zlvk  
grphwlf gxvhw lq plqlwulaj w  
vkh vlnŌ ^9;` Ghvslv ōz  
pruadw/vk ylveldv/ ri sdq dāg  
gheldv/ fdāhg lqw txhvwq vkh  
Ōhāj xh sdudgr{x dāg frqvlexvng  
w vkh hslghp lf x uhfrj qlvrq dv d  
fulvlv1

Vkh vshflif srsxāvrq  
prw diidfvng gxulaj vkh 4<5:  
hslghp lf dāv frqvlexvng w vkh  
hdvdrq ri ghaj xh w d sxedf  
khdak fulvlv1 Prwghaj xhŌxiihuhv

I LJ XUH7=NRP R Dg/ P dufk 59/ 4<5: Ō  
ŌGr QrwZ dwirvkhDxvkrvhw  
w vāhDfvrqŌ

z huh z klvŋ1 Uhsruw ilāg di vnu vkh  
hslghp lf hwl p dāvng vkdwqhduj rāh  
lq vz r Ōxurshdqvx kdq frqvāfvng  
ghaj xh/ z klāh shukdsv rāh lq vng  
lāglādv dāg Diufdāv ehfdp h lāŌ  
^9< Vkh uhsruvng glvlexvrq ri  
glvhdv lv qrvāedh1 Dāg d elw  
sx}}dāj 1 ^3` Lq vurslfdō σfdvrqv  
z khuh ghaj xh lv hāghp lf d  
glvfuhsdqf} ri vlv vjsh ehvz hāq  
qhz hu Hxurshdq duāydv dāg  
qdvlyhŌerūq uhvghqvw frxāg eh  
h{sādlāgh dv vkh uhxāvri lp p xqlv/  
σfdo uhvghqvw dftxlūg iurp  
fklāgkrrg lāihvrvq1 ^4` Exw  
ghaj xh z dv qrwhāghp lf lq Gxuedq/  
dāg vkhuh lv dwhā uhdrq w ehdhv  
vkdw vjqlilfdāv/ pruh Diufdāv  
vkdw z klvŋv dftxlūg lp p xqlv/  
gxulaj vkh frqvlghuedē vp dāhu  
ghaj xh rxvāhdnvlq 4<59/ 4<47/ dāg  
4<351 Rq vkh rvkhu kdāg/ dftxlūg  
lp p xqlv/ p d} kdyh dp lvng

dssdfdvq w vkh ōz hu lāflghqfh  
ri glvhdv revhuyhg dp rāj lāglādv1  
Ghāj xh z dv hāghp lf lq p dā} flvhw  
rā vkh lāglādv xēfrqvlāghqvw vr vp h  
lāglādv surēdē duāyhg lq Vrxvk  
Diufd z lvk kdūgŌ rā lp p xqlv/ w  
ghaj xh1 Exwvkv h{sādlādv rā fdq  
rāq sdvādv} dfrxqvw iru vkh  
gliihūghfv qrvng lq Gxuedq/  
ehfdxv/ el vkh 4<53v/ vz rŌvklūgv ri  
lāglādv lq Qdvāoz huh erūq lq Vrxvk  
Diufd1^5` Māfh vkh prwreylrv  
elrāj lfdō idfvw vhhp xādnhd w  
dfrxqvw iru vkh vnhz hg glvlexvrq  
ri glvhdv/ vkh uhdrqv p d} dh  
hāvz khuh dāg lāylv ixvkhuh  
lāyhvlj dv rā1

Vkh ilāglāj vkdw z klvŋv  
z huh glvsursurqvādv dīhfvng el  
vkh hslghp lf fruhvraqv w prw  
phqvrqv ri vkh udfh ri ghaj xh  
vxiihuhv lq vkh P hufxū 1 Ixvkhuh/  
glvfxvvrq ri vkh hslghp lf lvādj hq  
devhqv iurp vkh ]xā qhz vsdshu  
lāqj d vāh Qdvāo dāg vkh lāglādv  
z hnd lāglādv Rslāvrq1^6` P hufxū  
uhsruw iurp qhjkerrgv ru  
vxurxāglāj ylādj hv lāfāghg  
frpp hāw dnh Ōxlvŋ d xpehu ri  
z hāhqrz q uhvghqvw duh grz q  
z lvk vkh frpsādlāvŌ vāh Ylhz,/  
Ōghduj vkh zkrāh ri vkh z klvŋ  
srsxāvrq kd v ehq dīhfvngŌ  
vāqj dāw/ ru Ōuhvkdvhv duh  
rffxulāj fklāid dp rāj Hxurshdqv  
vāhuh, Ō ^7` Vkh iluw lāvhwflgh  
dgyhulvhp hāw vkdw h{sdfvlv/  
phqvrqhg ghaj xh w vāo lv  
surgxv qrvng vkdw Ō733 ri 5/333  
hdvfwū lq rāh frqvlāghqf} Ō  
hdvfwū ehqāj z klvŋ surshu/Ō  
rz qhw Ō glg qrvrvŋ lq d uhfhq  
hdvvrq Ōz lāj w vkh hslghp lf ri  
Ghāj xh lhyhūŌ^8` Ehfdxv z klvŋ  
Gxuedqlvŋv z huh vr khāyld  
dīhfvng/ vkh surqrxāfhq dāg  
ghedvŋv lq vkh P hufxū z huh qrw  
derxw rvkhuh dāg vkh shufhlyhg  
Ōvkhuh x exw z huh hāj dj hg el vkh  
srsxāvrq vxiihūāj prw iurp vkh  
glvhdvŋ1 Vklv gliihūg p dūhgd  
iurp vkh vp dāsr{ rxvāhdn lq vāh  
4<59/ lq z klfk qhduj dā vxiihuhv  
z huh iurp vkh lāglādv frpp xqlv/  
exw rāq d ihz z hārii lāglādv  
yrlfv frxāg eh irxāg lq vkh  
sxedf dv rā1 Li ghaj xh kdq  
glvsursurqvādv dīhfvng  
Gxuedq v lāglādv frpp xqlv/ rāh  
z rāghw li vkh sxedf glvrvxuh  
durxāg vkh hslghp lf z rāg kdyh  
frqāhfvng prvtxlv Ōerūq lāghw w

vkh udfldo vhwrvjshv ri lāglādvx  
xqvāvlādv kdelw dāg dylāj  
frāglvrv frpp rāq lāvrnhg  
gxulāj vkh vp dāsr{ rxvāhdn/  
udvkhuh vkdw vkh qhjkerrūq  
lāglādvx duhsrvādv vhw ri  
vz klvŋ, p lggchfvāw  
ŌrxvkrāghvŌ Dv lūw dv/ dz klvŋ  
srsxāvrq z hāsrvlv qhg  
srādv dā} dāg sudfvhg lq  
fkāqāhdāj glvādvādv rā vkrxjk  
vkh sxedf p hglxp ri qhz vsdshu/  
surēdē frqvlexvng w vkh Khdak  
Ghsdūp hāw uhyvdo rā vkh  
hslghp lf1

Xālv dvādv vkrxjk/ ghvslvŋ  
vkh phulw ri vfdh dāg vxiihūāj dāg  
vkh fāp ru iurp z klvŋ uhghvklv/  
vkh prw vjqlilfdāw idfvw lq  
ghaj xh v hāvedvkv hāw dv d sxedf  
khdak fulvlv lq 4<5: dsshdw kdyh  
ehhā hfrqrp lf1 Z khā vkh P hufxū v  
hglvūdo sdjh iluw ghfvhg vkh  
khdak ghsdūp hāw Ōdvādv sr lāw  
ri ylv Ō dāg z lāqāj qhw w dwhvkh  
hslghp lf uxā lv frxvhw/ vkh  
dū xp hāw z dv qrw ālg rā  
kxp dāvlādv j urxāgv1 lāvādv/ vkh  
hslghp lf vāh Ōhfrqrp lf hīhfvŌ z huh  
flvng dv Ōhulrv hārxjk w fāvūdv  
z krāh dūhūg hīruw w fādu vkh  
Gxuedq duhd ri vkh prvtxlv  
p hādv/ dāg nhhs lfv dūvŌ^9` Vkh  
P hufxū hglvūw sdvng lāw vkh lū  
frāp d sdūj vsk iurp vkh lū  
vlvūw sdshu/ Vkh Dgyhulvhu/  
xqdedvkhgd iudp hg lq p dūhvw  
āj lf=

Dwhvkh yū ōz hwhvāp dv/ ilv vkrxvdāg  
z d} h hāghw lq vlv vp dāvz q kdyh ehq  
rxvri frpp lvrq iru derxwd z hŋ1 Lq  
rvkhuh z rāg/ ilv vkrxvdāg z hŋv ri  
surgxv vhw hīruw kdyh ehq glvfw  
vkh vāz q1 Lq dāglvrv/ vkhuh lv w eh  
fdāxādv vkh lp sūlvng ylādv/ gxulāj  
frāydv hāfh/ vkh glvrū dā} dv rā ri  
z dūkrxv/ vkr dāg riilv rz lāj w  
ghsvng vāiv/ dāg vkh glyhūrv ri ilāqāfv  
w grfvw dāg fkhplw vkdw z rāg  
rvkhvŋv eh lq flvāvrq lq dūw  
āj xērv fkdāqāh Vkh vkslg lfrqrp lf  
z dvŋ ri ghaj xh fdā eh fkrāfāg lq vāfk  
vūp v dv rxj k w p dndūhdā} dyhexvlqhw  
frpp xqlv/ ghvālv lūv rāg qyhu dāz d  
uhshvrv ri vkh vklāj 1^: `

K huh vkh vj p svp Ō ulhāvng  
Ōhāj xh sdudgr{x Ō qhvlkhuh  
gdāj hrv hārxjk w dāv/ qru  
p lāg hārxjk w lq qru Ō z dv vāng  
dz d} lq idyru ri dā xāht xlyrfdo

dj xp hqw dj dlqww Ôkh vxslg hfrqrp lf z dwn ri ghaj xh1 Z lvkq d z hnn vkh vdp h vsdf hfdahg rq vkh Fkdp ehuv ri Frpp huf h dgg lqgxwulhv w suhvxuh vkh p xqlf sddv w z dug dfvr q1^;`

Z khq vkh Fkdp ehuv ri Frpp huf h khag vkhlu dqqxdo p hhwaj vkh iræz lqj prqvk/ vkh dvrfl dvrq glg qrw h{sdf lvq} dgguhv p xqlf sdo lqlv dvyh1 Exw lw suhvlghq w P uf J xqgholaj hu/ glg ghfuj vkh hslghp lf w lp sdfw rq exvlqhw lq vkh w z q1 Kh hvlp dvhg vkw Ôkh gluhf w w z runhu vkrxjk a vvwlp h/ dgg w hp sã| hu vkrxjk a vvwlyf hv/ p xvwuq z hoo lqw vl{ ilj xuhv z khq h{suhvhg lq vhwudaj Ôdgg Ôwchdw93 shuf hqwr i vkrvh hp sã| hg lq z kdw duh vrp hvlp hv riilf daj ghvfulehg dv Ôdlqixo rffxs dvr qv Ô kdg valnhq vfn chdyh1^; <` Erglv dgg exvlqhv z huh edvuhg e| vkh hslghp lf1 Dgg vkh erglv diihfvng z huh qrw rqq vkrvh dwvkh a z hgg ri vkh z dj h v f d d h1 E| ævñ P d| / dv fr r dhu vñp shudvuhv duhyhg dgg vkh 4<5: hslghp lf ehj dq w hee/ d ghchj dvr q iurp vkh Fkdp ehuv ri Frpp huf h dgg lqgxwulhv/ vkh P dwnu Exlghuvx Dvrfl dvrq/ dgg vkh Uvhdvuhv Frxqflop hww lvk vkh Wz q Frxqflo w euhi vkhp rq vkh hfrqrp lf hiifw ri vkh vp dæsr{ dgg ghaj xh rxvuhdnhv1^; 3` Vkh w z q w exvlqhv uhsuhvqhvdvlyhv lqvlvng vkw vkh p xqlf sddv pryh dj juhwyhd w Ôlvhdvñsurr ix Gxuedq/ dgg sãghj vkhlu vxssruw iru vkhv dj hggd1 ^; 4` Vkh qxlvdqfh z dv qrz f d d u j frqvlguhg d vkuhdw Ó r q h vkw ghp dggg surdf vlyh suhyhqv1

Exw qhdvuhp Ôfrqrp lf z dwn x z dv qr vkh p ruvdu vkw dwerxqg w j hvkhu vkh w z q w sr d v f d h w d v k p h q w errvhuw/ qhz vsdshu hglwuw/ dgg a f d o f d s l v e l o t Ghaj xh vkuhdvng vkh ylvrq vkhvh frqvwvkhqflhv vkuhg ri Gxuedq lqgxwuldo ixvuh1 Lq vkh ævñ 4<53v/ vkw d w y l v r q l q y r o y h g d q r y h u w s l y r w i u r p e h d f k w e d | d g g v k h e h d h i v k d w Ô k h x o l p d v h g h w l q | r i S r u w Q d v e l o d h v l q l w v h d g | h { s d q v l r q l q w v k h l q g x w u l d o p h w r s r d v r i V r x v k D i u l f d t Ô ^; 5` D w z q p d g h d g r z q D f h v r

**Ghslvñvkh p hulw ri v f d d h d g g v x i i h u l a j d g g v k h f æ p r u i u r p z k l v h u d g h u k l s / v k h p r w w l j q l i l f d q w i d f w u l q g h a j x h w h w e d v k p h q w d v d s x e d f k h d o k f u l v l v l q 4<5: d s s h d u w k a y h e h q h f r q r p l f 1**

sdlp hqwr q vkw ghwlq| vkrxjk lqyhwp hqw lq ædgg uhfæp dvr q durxqg vkh kduer/ d qhz judylaj grfn/ judlq hdydvuw/ dgg frdo ht x l s p h q w l q f u h d v h g f d s d f l v y i r u h d f w f l v y s u r g x f v r q / d a g d q h z z d v h u v f k h p h v k d w z r x a g v r r q s u r y l g h d p s d h z d v h u i r u l q g x w u l h v 1 ^; 6` Vkhv s d v k w s u l p d f | d a g s u r v s h u l y f r x a g q r w e h h a g d a j h u h g e | k r x v h Q z h a j a j p r v t x l w v 1

Lq lw hglwuldo eduudj h dj dlqww vkh khdoak ghsdwp hqw lq ævñ P dufk dgg Dsul d vkh P hufxuj z ulvhuw p dgh f d h d u v k d w v k h p r w w l j q l i l f d q w w r x e d h z l v k g h a j x h z d v v k d w l w v k u h d v h q h g G x u e d q w a j 0 v h u p s u r v s h f w 1

Z kdwrkshz lœ Gxuedq k d y h r i h w e d v k l a j l w h o d v v k h j u h d w l q g x w u l d o f h a q v h u r i v k h X q l r q l i v k h y l v d v y d a g s u r g x f v y h h i l f h a q | r i d a o f a l v h v r i z r u n h u l q v k h w z q d a g g l w u l f w d u h f r a q w e l v e d s s h g e | d a q x d a j u h f x u h q w h s l g h p l f v r i g h a j x h i h y h B Z l a o q r w p d a x i a f v x u h v i l j k w v k | r i v k h s a i f h B ^; 7`

Vkhv frqfhuq p dnhv sællq vkw dvsludvr qv iru dq lqgxwuldo ixvuh z huh vkh p r w w l j q l i l f d q w i d f w u l q v k h u h f r q v l g h u d v r q r i g h a j x h d v d s x e d f k h d o k f u l v l v 1 ^; 8` O d | l a j f a e l p w v k d w l q g x w u l d o g h w l q | d a h d g | u h t x l u h g v k d n l a j r i i Ô r q y h a q w r q d o z l v g r p x d e r x w v k h v u r s l f d o z r u n h u d a g v k h l q i o x h q f h r i h a y l u r q p h q w l V k h d g g h g e x u g h q d a g w l j p d r i p r v t x l w 0 e r u q h w u r s l f d o g l v h d v h f r x a g q r w e h f r x q v h q d a f h g 1

Vkh vkrxjkw kv ehq dgydqfhg iurp hvz khuh vkw vkh khdwri vkh Gxuedq vxp p h u h g x f h v k h f d s d f l v y r i l w z r u n h u g x u l a j v k d w s h u r g 1 V k l v l v w e h g r x e v n g / e x w l w v q r w w e h g r x e v n g v k d w d q d a q x d o g h a j x h h s l g h p l f l q f r a q w f v r q z l v k v k h v x p p h u k h d w x a g r x e v n g d z r x a g k a y h v k d w h i i f w d a g l i v k l v h s l g h p l f e h f r p h v d s h u p d a q h a w i h d v x u h r i v k h G x u e d q | h d u l w z l a o s u r y h d y h j v h u r x v k d q l f d s l q r x u f r p s h w l r q z l v k r v k h u w z q v i r u w d g h d a g l a g x w u l 1 ^; 9`

K h u h d h v v k h p r w w l j q l i l f d q w u h d v r q z k | v x w e l l q h g s u h v x u h z d v d s s d h g w p d n h g h a j x h d s x e d f k h d o k f u l v l v 1 O y h v f d q e h

vkuhdvng h g 1 V x i i h u l a j f d q r f f x u l l a j i o x h q w d o f r p p x q l w h v f d q u d l v h k h a l P r q h | d a g p d a q r x x w f d q e h a w l E x w v k h i x w u h p x w w e h g h i h a g h g Ó s d w f x a e u j l i s u r i l w p l j k w e h p d g h v k h u h 1

Frqfæv l r q

Z khq ghaj xh ihyhu vwxfn Gxuedq gxulaj vkh iluwpr qvkv ri 4<5: / lwz dv frqvlguhg Ôar f dxvh irudæup Ô D qxlvdqfh/ qrw d f u l v l v 1 V k h g l v h d v h w a z f d v h p r u e d v y / v k h d p l v n g v l } h r i s u h y l r x v g h a j x h r x v e u h d n v / v k h l u h j x a e u d a g l q i u h t x h a q w l p l a j r i h s l g h p l f v / d a g v k h y l u x v w w a d a q v l w l r q e | d k r p h 0 g z h a j a j p r v t x l w v s h f l h v / d n g p x q l f s d o k h d o k d x v k r u l v h v w l q l v d a j d g r s w d æ l w h j O d l u h d s s u r d f k 1 V k l v w a r g l q w e l u n f r a q w e d w w w v k h d y h o r i p r e l d } d v r q v k d w d f f r p s d q l h g v k h v p d a s r { r x v e u h d n r q d d i h z p r q v k v e h i r u h 1

Gxulaj vkh fulvdo z hnv z khq vkh hslghp lf z dv exlaj lqj dgg prvt xlw ghqv l v h v z huh u d s l g d l a f u h d v l a j / v k h D f v a j P h g l f d o R i i l f h u r i K h d o k d n f v k u h g k r x v h k r a g h u w v k u r x j k v k h s u h v d e r x w v k h l u s h u r q d o u h v s r q v e l d v y w h d p l a d v h d n g h v h j | s w e u h g l a j v l v h v / e x w g l g q r w r u j d a j } h r u s u r p r v h d e u r d g h u s u r j u d p r i l q v s h f v r q v 1 V k l v s r v x u h æ v ñ h u f k d a j h g / x a g h u h v f d a e l a j s x e d f s u h v x u h d a g f d a o i r u v k h K h d o k G h s d u p h q w w u h d w g h a j x h d v d s x e d f k h d o k f u l v l v 1

Z khq vkh ævwghaj xh f d v h v z h u h v æ a h g / d x v k r u l v h v h w l p d v h g v k d w 83/333 s h r s d h k d g v x i i h u h g i u r p v k h g l v h d v h l q d a g d u r x a g G x u e d q 1 E x w v k h v k h u v f d d h r i v k h h s l g h p l f z d v r q h r i d f r a q w h a e d v r q r i f r a q w e x v l a j i d f w u w v k d w g h p r a q w u d v n g v k d w g h a j x h v k r x a g e h h a j d j h g d v d v k u h d v l V k h d v r f l d v n g k x p d a q v x i i h u l a j d a g s x e d f f a e p r u i u r p v k h g l v s u r s r u l r q d v n d j d i i h f v n g z k l v h f r p p x q l v y z h u h d o r l a i o x h q w d o t

Lq d frqvwvkhqflhv q/ qrw dæ w e l u w d u h h t x d o t H f r q r p l f f r q f h u a v z h u h i r u h p r w l q d w h p e d a j d f r d d v r q r i e r r v h u w / a f d o s r d w f l d a q / f r p p h u f h / d a g l a g x w u l v k d w l q P d | / g h p d a g g h g v k h Ô g l v h d v h ñ s u r r i l a j Ô r i G x u e d q d a g m l q h g z l v k v k h W z q F r x q f l o w d i i l u p / Ô l r r g S x e d f K h d o k p h d a v J r r g E x v l q h w Ô ^; ` E x w Ó d w d

vlp h z khq Gxuedq z dv vklivlqj lw vjkw iurp krdgd| uhruw w lqgxvvdlo srw Ó vkh Qruwk Vælu vkwjxlghg vkh gulyh w suhyhqw ixvuh ghaj xh rxvæhdnv z dv vkh guhdp ri d survshur xv lqgxvvdlo ixvuh1 D ylvraq rhrsdugl}hg e| hslghp lf vursifdo glvhdv dqq vkh frqirxqqlqj prvtxlwv vkwvsvhdg lwl Ghaj xh ehfdp h d sxedf khdak fulv ehfdxvh Ôdihj xduq'ljaj` vkh juhdxvuh ri vkh erurxjk lv vkh sudprxqw vlvn ri vkh Khdak Ghsdwp hqvîÔ^;`

Vkh hqvkvxvdv iruglvhdvh0 surrilqj vkw uhvæthg iurp vklv hslvrgh lq Gxuedqæ klwvuj idæv vt xduhd dæqj vkh urxvh w vkh Gxuedq Erurxjk Erxqgdulhv Frpp lwrq/ vkh h'vævraq ri vkh pxqlfssdvwæ frqwr o ryhu vkh vhyhq vxurxqqlqj shu'æuedq duhdv dihz |hdw ævhu/ dwhp sw w dssd vkh 4-56 Qdvlyh Xuedq Duhdv Dfwr vkrvh qhz d dgghg vsdfhv/ dqq vkh irufhg uhrvdv dqq prghuqlw sædqlqj hihfvng dw vkh lqgxvvdlo vlvn dwwkh khdg ri vkh edl 1

Exwrq Mqh 4/ dævkdæd| lq vkh ixvuh1 Vkwgd| vkh P hufxuj æp hqvng/ Ô qh ri vkh dwhu/ vkrxjk xuj hqwsuredhp v ri vkh prp hqvlv vkwri frqylqlqj Vrxvk Diulfd vkw vkh ghaj xh hslghp lf lv dwdq hqg'î Ô^; <` Gxuedq z dv vkwæd w z q e| vkh vhd dqq furz gvri vhdv qdohixj hhv idhqlqj vkh fræg Klj kyhæg z lqvhu z huh h'shfvng w vrrq dæj kwdvkvk fhqwdæ vdlq vævraq1 Vkhuh z dv p huul p dnlaj dqq prqh| p dnlaj w ærn divhu' Dqg shuksv Ó li vkh judp rskrqh vkwæ z runhg Ó d dwhv Fkdudhvraq1

Ukrghvd/ 4: 41 Vhh dæv/ SuhvraqZ k| vlv U1 Frqvwxfvng Ohlvuh Vsdfh= Vkh Vhdvgh dw Gxuedq1 Dqgdv ri Vxvlp Uhvduf k15334>5; =8; 408<91

^6` Vkh Fkdudhvraq Hslghp lf 1 Vkh Qdvæb P hufxuj 1 Mqxdul 4/ 4<5: 1

^7` Sxedf lqv Srd| Ylqglfvng= Vkh Uhfhw Vp dæsr{ Rxvæhdn1 Vkh Qdvæb P hufxuj 1 Ghfhp ehu; / 4<591

^8` Vkh vklvthq Qdvæb P hufxuj hglvudv lq 4<59 uhdvng w vkh vp dæsr{ rxvæhdn dsshdng rq Rfwehu 59/ 59/ 5<) 63 +5, dqq Qryhp ehu 5/ 7/ 8/ 43/ 45 +5, / 46/ dqq 4: 1

^9` Vkh qxp ehu ri lqihfvqv lv qrw z lvrwxwxfhwællqv1 P dql shrsd Ó sdufææd vkrvh z lvk pruh plæg vjpswrv Ó suredeq qhyhu ufhlyhg phglfdo fdh dqq vrp h vkwgdg p dl kdyh ehq plvldj qrvhg dv vxihulqj iurp rvkhu vxufhv ri ihyhu' Pruhryhu/ vkh p hvkrv xvng w fræfvngdæv r q vkh rxvæhdn dqq vkh idfvw xvng w hvlp dvh vkh qxp ehu ri fdvh duh qrw ghvldng lq qhz vsdshu vxufhv1 Iru vkh sxusrvh ri vklv hvdl/ d vqvh ri vkh hslghp lfæ vfdh lv pruh lp srwævkwæd vshlilf dffxudf| 1 Vkh iljxuhv qrvng deryh dsshd lq Fxuhqw Zruæg Suhvdhqv ri Frpp xqlfdeh Glvhdvh1 Sxedf Khdak Uhsruw1 Rfwehu 59/ 4<5; > 76= 5; 5<5; 661 Dq dæv d e| d æfdo sk|vldq vkw dsshdng lq Vrxvk Diulfdæ p hglfdo mæuqdo lq Vhsvp ehu 4<5: vævng vkw Ôd frqvhu dvlyh hvlp dvh Ô ri vkh hslghp lf Ôv frqvghng w eh 73/333'î Hglaj w q DG1 Ôghaj xh Ôv Vnhq lq vkh Uhfhw Hslghp lf lq Gxuedq1 Vkh Mæuqdori vkh P hglfdo Dvrfldæv ri Vrxvk Diulfd 4<5: > 4=77907; 1

^` Fxuhqw Zruæg Suhvdhqv ri Frpp xqlfdeh Glvhdvh1 Sxedf Khdak Uhsruw1 Rfwehu 59/ 4<5; > 76= 5; 5<5; 661

^;` D J uhdw Rssruæqlv1 Vkh Qdvæb P hufxuj 1 Mqh 4/ 4<5: 1

^<` SuhvraqZ k| vlv 8; 71

^3` K| vrs Mvhdv vks Hp sluh=Dvldq/ Diulfd dqq Eulvkv Vdlæw lq vkh P hufkdqwp dulqhf14; ; 304<781 Mæuqdori Dvldq dqq Diulfd Væglhv1533<77=7<5: 1 Sdj h 951

^4` l uhxqg E1 lqvghv dqq Rxwlvghu=vkh lqldq Zrunlqj Fæw ri Gxuedq/ 4<430 4<<31 Srwvpxvk/ QK= Khlqhp dqq> 4<<81 Sdj h 5<1

^5` P dl æp S1 Vkh Vævjj d iru Vsdfh lq Væ hqvthv'Fhqvuj Gxuedq1 Lq= P dl æp S/ hg> Hgz dugv L/ hg1 Vkh Shrsdæ Flv= Diulfd Qih lq Væ hqvthv'0 Fhqvuj Gxuedq1 Srwvpxvk/ QK= Khlqhp dqq> 4<<9=40641 Sdj h 61

^6` Vfrw G1 Ôfvhdvlyh GhvævfvraqZ

Hduq Prghuqlw Sædqlqj lq vkh Vrxvk Gxuedq lqgxvvdlo J r qh/ Vrxvk Diulfd1 Mæuqdori Vrxvkhuq Diulfd Væglhv15336> 5<=568058<1 Sdj h 5751P dl æp / 61

^47` l uhxqg/ 661

^48` Lelg1

^49` P dl æp / 6

^4: ` Vkhv sræævraq vævfv duh iurp vkh Gxuedq Erurxjk Erxqgdulhv Frpp lwrq/ 4<5: 5; 1 D vxp p dul vædch lvsurylghg lq= l uhxqg/ 661

^4;` D Vrxvk Diulfdæ sxedf khdak p dæv iurp vkh shulg lqvævfvhg vp dæsr{ e| vævfv lq vlv lq Vrxvk Diulfd1 Lw vshlilfdæ uhihqvfhv d z lghvshdng vp dæsr{ hslghp lf lq 4; ; 4 dv dæ hduq hyhqvævkvævshg vkh dhj do hqylurqp hqw duræqg vp dæsr{ rxvæhdn1 Uhlq DZ 1 Vdqlvævraq dqq Sxedf Khdak= Z lvk Vshlilfd Uhihqvfh w Frqglvraq lq Vrxvk Diulfd1 Fdshwz q= Mæv) Fr' OVG> 4<5: 1 Sdj h 5; 505; 61

^4<` Vp dæsr{ l d vkh hv' Z ruæg Khdak Ruj dql} dvraq1 53341 Dydæædæv dæv kwæ= 22 z z z z kr 1qvæp hglf hqvæv'2 idf w vkh hv'2 vp dæsr{ 2hq21 Dffhvhg Dsulo 4; / 53451

^53` Vhh Ujæævraq Dj dqv vkh Rffvævfh dqq Vkhvævqh Rxvæhdn ri Vp dæsr{ / Jryhuq hqw Qrvfh 53<7 ri 4<59/ vxp p dul} hg lq Uhlq/ 5; 705; 91

^54` Lelg1

^55` Vkhvævduf v/ æf dævng lq vkh qrvkhuq sdvri vkh Erurxjk/ ehruh uhdvklqj vkh vlyhu dæqj vkh Xpj hql Urdg/ z huh pruh vshlilfdæ nqrz q dv Vklvæv Edudfnv dqq Fkhvæv Edudfnv1 Vkh| z huh krph w lqldq ææv uhv dqq vkh lvd idp ldv dqq d pævkv vp dæv qxp ehuri Diulfdæ z runhu'1

^56` Vp dæsr{ lq Gxuedq= Vhyq Fdvhv Uhsruvng dv Xpj hql1 Vkh Qdvæb P hufxuj 1 Rfwehu 48/ 4<591

^57` Lelg1

^58` Lelg1

^59` Gxuedq P hglfdo Vrfvlhv'1 Vrxvk Diulfdæ P hglfdo Uhf rug1 P dl 56/ 4<47>: = 49; 049<1 Dæv/ lqvæv' d ru Ghaj xh lhyhu= Gxuedq Sxedf Frqvævng1 Vkh Qdvæb P hufxuj 1 Mqxdul 5</ 4<5: 1

^5: ` lqvæv' d ru Ghaj xh lhyhu= Gxuedq Sxedf Frqvævng1 Vkh Qdvæb P hufxuj 1 Mqxdul 5</ 4<5: 1

^5;` Lelg1 Dæv/ Sklæsv K1 Vkh Ruj lq ri vkh Sxedf Khdak Dfwr i 4<4<1 Vrxvk Diulfdæ P hglfdo Mæuqdol 4<<3>: = 86408651

^5<` Lelg1 Vkhv frppævfv z huh Vqj dæv vkh qrvk, / Dp dæv} p w wæv vkh vrvk, / dqq Vhd Ylhz / æf dævng dæqj vkh vdlq dæv w vkh lqvhu' r' ævævhl ræg vkh Erurxjkæv vrvkæv hvg hj h1 Rq Mqxdul 58/ vkh P hufxuj uhsruvng v r z hnv ri Ôqvæv' dæv Vhd Ylhz 1 Vkhlv 7:

Qrvæv=

^4` Vkh Fkdudhvraq Hslghp lf 1 Vkh Qdvæb P hufxuj 1 Mqxdul 4/ 4<5: 1

^5` Vkrævdæqv Ylvæv Gxuedq1 Vkh Qdvæb P hufxuj 1 Ghfhp ehu 63/ 4<591 lq vkh Hp sluh0rv dnhg hduq ghfdghv ri vkh væ hqvthv fhqvuj / errvhuw ri Pxl} hqehj dqq Fdpsv Edl dæv fælp hg vkh dssæævraq Ôkh Euj kwq ri Vrxvk Diulfd Ô1 Vkh ghvulsævraq z dv surplævng dssdhg w Gxuedq lq vkh vævho dffrxqw ri Eulvkv mæuqdæv K1 Kdp lævq | ih= | ih KK1 Vrxvk Diulfd Wgd| / zlvk dæ Dffrxqw ri Prghuq Df hvv



fdq eh frqvlghuhg vkh iluwghvf usvwr q  
ri vkh 4<5: hslghp lf lq vkh P hufxuj 1  
Krz hyhu/ r q Mlqxdul 44/ dq lvhp udq  
qr vqaj vkw Hdw Orqgrq riilflda/  
ilqglaj 48 fuhz p hp ehuz z lvk ghaj xh/  
txdudqvlqhg vkh V1/1 Mj huirqvrlq Ó  
z klfk dhiw Gxuedq r q Mlqxdul <vk1  
VKhv lqihfvrv z huh dwulexvng w  
Prpedvd/ Ô khuh vkh yhw h f dathg  
uhf hqvô Krz hyhu/ vkh Nhqj d J d j h v h  
lqglfdvrv vkh v h d p hu d h w N l d q g l K d u e r u  
r q Ghfhp eh u 41 Z klh vl{ z h h v d q g  
vhyhudo v k l s e r d u g v a d q v p l w r q f l f d h v  
d u h s r v l e d h l w h t h p v d w d h d w d v d n h q Ó  
j l y h q v k d w g h a j x h w l q v l q v l f l q f x e d w r q  
shulrg dyhudj hv 70 gdl v/ vkh v k l s w  
duulydolq Gxuedq r q Mlqxdul 7/ d q g v k h  
w k h q x q u p d u n h g , s u h v h q f h r i g h a j x h  
l q v k h w z q Ó v k d w v k h l q i h f v r q v  
g l v f r y h u g d w H d w O r q g r q r f f x u h g l q  
Gxuedq1 Glvhdv Der dug Vks= lhyhu  
Frqvafvng r q H d w D i u f d q F r d w l V k h  
Q d v a b P h u f x u j 1 M l q x d u l 4 4 / 4 < 5 : 1 D a r r /  
V k l s s l a j U h s r u w N l d q g l K d u e r x u l V k h  
N h q j d J d j h v h l G h f h p e h u 5 5 / 4 < 5 9 > 5 ; =  
48661  
^63` Lqioxhjd ru Ghaj xh lhyhuB=  
Gxuedq Sxedf Frqixvng1 Vkh Qdabo  
P h u f x u j 1 M l q x d u l 5 < / 4 < 5 : 1  
^64` Uhlq/ 63; 1  
^65` J x e d u / G h a j x h / 5 5 < 1  
^66` Lelg1  
^67` Kxp skuhj v P 1 Ghaj xh lhyhu=  
Euhdner qh lhyhu lq=Nlsh NI / hg1 Sr{/  
Saj xh/ d q g S h w l d h q f h = G l v h d h l q K l w r u j 1  
O r q g r q = R u r q S x e d v k l a j J u r x s > 4 < < < /  
s d j h < 5 1  
^68` Hglaj wq/ 77: 1  
^69` Frqvlghu vkh f d h v p r u a d d v j u d h v l q  
v k h v z r h { d p s d h l q v k l v h v d l 1 V k h 4 8  
g h d v k v d p r a j 9 3 u h s r u h g f d h v r i  
v p d a s r { l q 4 < 5 9 u h s u h v h q v n g d Ô l a u d h v x  
r i 5 8 ( 1 V k h 9 4 g h d v k v d w u l e x v n g w v k h  
h w l p d v n g 8 3 / 3 3 3 f d h v r i g h a j x h  
| l h a g h g d f d h v p r u a d d v j u d h v r i 3 1 4 ( 1  
^6: ` I r u h { d p s d h / D q r v k h u G h a j x h  
H s l g h p l f = Q x p h u r x v F d h v l q v k h  
E r u r x j k / V k h Q d a b o P h u f x u j 1 l h e u d j  
4 < / 4 < 5 : 1  
^6; ` U h l g / 6 3 ; 1 V k l v w a l n p h q w f d q q r w  
k r z h y h u / e h d s s d h g w f r q v n p s r u d j  
g h a j x h g l q d p l f v d a g v l a f h l p p x q l v j  
l v v x e v / s h v s h f l i l f d a g v k h g l v h d h v  
i r x u v x e v / s h v r y h u a d s p x f k p r u h  
f r p p r a q d 1  
^6<` J x e d u / G h a j x h / 5 6 9 1  
^73` J x e d u G 1 G h a j x h 2 G h a j x h  
K h p r u u k d j l f l h y h u = K l w r u j d a g  
F x u h q w V a l v v 1 l a q = Q r y d u w l r x q g d v r q  
V j p s r v x p 5 : = Q h z W h d v p h a w V u d h j l h v  
i r u G h a j x h d a g R v k h l a y l y l u b G l v h d h v 1  
F k l f k h w h u / X N = M k q Z l d h ) V r q v / O u g >  
5 3 3 9 = 6 0 4 9 1 S a j h 7 1  
D f h v r

^74` J x e d u / G h a j x h / 5 7 5 0 5 7 8 1  
^75` Lelg1 5781  
^76` Lelg1  
^77` J x e d u / G h a j x h / 5 7 7 1 D a r r /  
G h a j x h 2 G K l = l u h t x h q w j D v n h g  
T x h w r q v 1 Z r u a g K h d a k R u j d q l } d v r q /  
5 3 3 9 1 D y d l a e d h d w =  
k w s = 2 2 z z z 1 h d u r t z k r 1 q v 2 h q 2 v h f v r q  
4 3 2 v h f v r q 6 6 5 2 v h f v r q 4 3 5 9 k v p 1  
D f f h w h g D s u o 5 7 / 5 3 4 5 1  
^78` D q r v k h u G h a j x h H s l g h p l f =  
Q x p h u r x v F d h v l q v k h E r u r x j k 1 V k h  
Q d a b o P h u f x u j 1 l h e 4 < / 4 < 5 : 1  
^79` Lelg1  
^7: ` Q d a b o U d l q i d a e = U h w u q v i r u P d u f k 1  
V k h Q d a b o P h u f x u j 1 D s u o 4 7 / 4 < 5 : 1 I r u  
v n p s h u d v u h w h i i h f w r q h { w l q v f  
l q f x e d w r q s h u l r g v / v h J x e d u / G h a j x h /  
5 7 6 1  
^7; ` J x e d u / G h a j x h / 5 7 6 1  
^7<` D q r v k h u G h a j x h H s l g h p l f 1 V k h  
Q d a b o P h u f x u j 1 l h e u d j 4 < / 4 < 5 : 1 D a r r  
V k h G h a j x h l h y h u R x v e u h d n / V k h Q d a b o  
P h u f x u j 1 l h e u d j 5 9 / 4 < 5 : 1  
^83` Lelg1  
^84` Vkh iluw dg/ iru vkh lqvhwf lgh  
NRP R/ udq lq Vkh Qdabo P hufxuj r q  
l h e u d j 5 4 1 V k l v z d v i r a z z h g v k r u w j  
e l v z r d g v v k d w w g d l z r x a g e h f d a t h g  
Ô g y h u w u d a x i r u v k h l q v h f w l g h  
E D O D O D / r q l h e u d j 5 6 d a g 5 7 1 R q  
P d u f k 4 / d q d g i r u v k h E h d f k K r v n o  
X p j d e d e d d s s h d u h g 1  
^85` G d a j h u r i G h a j x h l h y h u l V k h Q d a b o  
P h u f x u j 1 P d u f k 4 4 / 4 < 5 : 1 V k h h w l p d h v  
r i 8 3 3 3 f d h v d a r d s s h d u h g r q P d u f k 4 4 /  
l q v k h P h u f x u j w v l w h u s d s h u / v k h Q d a b o  
D g y h u w h u r l V k h i l j x u h z d v u s u l q v n g l q  
v k h P h u f x u j w d n g h g l w u d o r q P d u f k  
4 5 1  
^86` V a p s l w R x v l V k h Q d a b o P h u f x u j 1  
P d u f k 4 5 / 4 < 5 : 1  
^87` Lelg1  
^88` Z du dw Odwl Vkh Qdabo P hufxuj 1  
P d u f k 5 < / 4 < 5 : 1  
^89` Nrpr Dg1 Vkh Qdabo P hufxuj 1  
P d u f k 5 9 / 4 < 5 : 1  
^8: ` G h a j x h S r v l w r q 1 V k h Q d a b o  
P h u f x u j 1 P d l 7 / 4 < 5 : 1  
^8; ` D J u h d w R s s r u x q l v j 1 V k h Q d a b o  
P h u f x u j 1 M l q h 4 / 4 < 5 : 1  
^8<` V k h w a d o s r x a d v r q r i v k h e r u r x j k  
l v d w n g d w 4 5 5 / < 9 l q d v a d e d  
v x p p d u l } l a j g d v l i u r p v k h 4 < 5 : 0 5 ; /  
G x u e d q E r u r x j k E r x a g d u h v  
F r p p l w r q l q l u h x q g / 6 6 1  
^93` Hglaj wq/ 7791 Dorr / FxuhqwZ ruag  
Suhyddhgh ri Frppxqlf dedh Glvhdhv1  
Sxedf Khadk Uhsruw1 Rfwehu 59/ 4<5; >  
76=5; 5<05; 661  
^94` Sxqvap w Klæ= Ghaj xh Hslghp lf1  
Vkh Qdabo P hufxuj 1 P dufk 4/ 4<5: 1  
^95` Ghaj xh Hslghp lf=Dufkghdfr q d a g

vkh ÔChvr q1 Vkh Qdabo P hufxuj 1 Dsulo  
:/ 4<5: 1  
^96` Rxu Ghaj xh= D Gxuedq Krp h  
Wf gdl 1 Vkh Qdabo P hufxuj 1 P dufk 5</  
4<5: 1  
^97` Dq Lqglj qdqw Krxvhr qghu1 Vkh  
Qdabo P hufxuj 1 P dufk 4</ 4<5: 1  
^98` Ghaj xh Sr vlvwr q1 Vkh Qdabo P hufxuj 1  
P d l 7 / 4 < 5 : 1  
^99` Ghaj xh=Krz l w K d s s h q v 1 V k h Q d a b o  
P h u f x u j 1 D s u o 5 5 / 4 < 5 : 1  
^9: ` Hglaj wq/ 77: 1  
^9; ` Gxuedq ) Ghaj xh lhyhu1 Vkh Qdabo  
P h u f x u j 1 P d u f k 4 : / 4 < 5 : 1 D a r r / G h a j x h  
H s l g h p l f = D u f k g h d f r q d a g v k h  
Ô C h v r q 1 V k h Q d a b o P h u f x u j 1 D s u o : /  
4 < 5 : 1  
^9<` Fxuhqw Z ruag Suhyddhgh ri  
Frppxqlf dedh Glvhdhv1 Sxedf Khadk  
Uhsruw1 Rfwehu 59/ 4<5; >76=5; 5<05; 661  
^: 3` Lqvhwv lqj d / d v h u r O x u y h j  
s x e d v k h g l q 4 < 8 : v n h v k h g z k d w  
d u k u r s r g o e r u q h y l u x v h v k d g r f f x u h g  
l q z k l f k s a d f h v l q V r x v k D i u f d r y h u v k h  
a d w 6 3 0 8 3 | h d u 1 G h a j x h z d v d p r a j  
v k h y l u x v h v v k h v h u h d u f k h u z h u h  
l q v h u h v n g l q 1 V k h w a g l s u r w f r o  
v l s x a d h g v k d w s d u f l s d q w f r x a g q r w  
k d y h w d y h d g p r u h v k d q 6 3 p l d h v i u r p  
v k h l u e l u k s a d f h g x u l a j v k h l u d i h w p h 1  
Z k l d h v k u d f h r i v k h s d u f l s d q w z d v  
q r w s u r y l g h g / v k h d u f d q r v n g v k d w v k h  
p r e l d v j r i V r x v k D i u f d q d i h p h d q w  
v k d w p r w s d u f l s d q w z h u h D i u f d q  
z r p h q 1 l q G x u e d q v k h u h v d u f k h u  
i r x q g 6 3 ( r i d g x a w l q d v p d a e v d p s d h  
+ 2 6 3 , k d g d q v e r g l h v w g h a j x h 1  
N r n h u r w J K / V p l v k e x u q N F / Z h l q e u h q  
P S 1 Q h x w a d d v l a j d q v e r g l h v w  
d u k u r s r g o e r u q h y l u x v h v l q k x p d a g d a g  
d a l p d a l q v k h X a l r q r i V r x v k D i u f d 1  
M l x u d o r i l p p x q r a j | 1 4 < 8 9 > : = 6 4 6 0 6 5 5 1  
^: 4` J x e d u / G h a j x h / 5 5 8 1  
^: 5` D f f r u g l a j w 4 < 5 4 f h q v x v g d v l /  
< 6 : 9 : r i v k h 4 7 4 / 6 6 9 l a g l d a v d y l a j l q  
Q d a b o z h u h e r u q l q V r x v k D i u f d  
+ 9 9 1 6 ( , 1 V r x v k D i u f d q l a g l d a f r a j u h w  
V a l n p h a w = V x e p l w n g w v k h  
J r y h u a p h a w r i l a g l d G h d j d v r q 1 l a g l d a  
R s l q l r q / M l q x d u l : / 4 < 5 : > 5 = 4 1  
^: 6` U h y l h z r i L a j d a d h Q d a b o i u r p  
M l q x d u l 4 w M l q h 6 3 / 4 < 5 : / | l h a g h g v z r  
s x e d f q r w f h v d e r x w v k h h s l g h p l f  
s a d f h g e l v k h G x u e d q W z q F d u n 1  
l a g l d a R s l q l r q p h a w r q h g v k h g h a j x h  
v l v d v r q v k u h v l p h v g x u l a j v k h v d p h  
s h u l r g e l l a f o x l a j v k r w t x r v a l r q v  
d i v n g i u r p G x u e d q w g d l d s d s h u l q v k h  
Ô Q r v n d a g Q h z v Ô v h f v r q 1  
^: 7` Lqioxhjd ru Ghaj xh lhyhu1 Vkh  
Qdabo P hufxuj 1 Mlqxdul 5</ 4<5: 1  
Wf qj d d w = J h q h u d o l v n p v 1 V k h Q d a b o  
P h u f x u j 1 l h e 4 3 / 4 < 5 : 1 G h a j x h l h y h u  
7;

Rxveuhdn=I uhvk Fdvhv r q vkh Ehud1Vkh Qdvalo P hufxuj 1P duf k 56/ 4<5: 1  
^ 8' NRP R Dg1 Vkh Qdvalo P hufxuj 1 I heuxduj 54/ 4<5: 1  
^ 9' Vwlp s Lw Rxv1 Vkh Qdvalo P hufxuj 1 P duf k 45/ 4<5: 1  
^ :` Lelg1  
^ ;` Lqqrhfqhfh Ò ru Z kdVB Vkh Qdvalo P hufxuj 1P duf k 4: / 4<5: 1  
^ < Vkh Frpp hufldo \ hduf Vkh Qdvalo P hufxuj 1Dsulo5</ 4<5<1  
^ 3' Lv Gxuedq Glvhdv SurriB=Exvqhvw P hq Vdfndh Frxqf1of Vkh Qdvalo P hufxuj 1 P dl 56/ 4<5: 1  
^ 4' Lelg1  
^ 5' Vklvt xr vñ lv vñhqiurp vkh 4<5905: Òp dlrux P lqxvñ Ò dgg dq dqqxdo vñvñp hqwh{ffhusvñg lq vklv duwf dh=Vkh P hvur sr dv ri Lqgxvñ lq Vñ 11Vkh Qdvalo P hufxuj 1Mq 5; / 4<5: 1  
^ 6' Lelg1  
^ 7' D Frqyhu1 Vkh Qdvalo P hufxuj 1 P duf k 63/ 4<5: 1  
^ 8' Kuhu/ d fxurxv lurqj lv zruk qr vñqj 1 Ghvsvñ vkh nqrz dñg h vkdwdq dvalfn ri ghqj xh fr qihw lp p xqlv/ vkh dnhdkr rg ri uhfxuqhvw hslghp lfv lv uñhdvñgq lqyrnhg1Frqxvñ duj xp hqwr z huh qrw p dgh vkdwr qh dgydqvñj h ri dq hslghp lf ri vklv vñ}h lv vkdwlwz rxqg vñuyh vkh vdp h ixqfvrq dv d p dv ydfflqdvñr q surj ucp 1 Vj qllfdqvñ uñgxflqj vkh qxp ehv ri vxvñsvñedh kxp dq krwv z rxqg dp lwfkdqfhw/ ru vñyhuh rxveuhdnv lq vkh qhduixvñuh1  
^ 9' Wñdp Z run Z dqvñg1 Vkh Qdvalo P hufxuj 1Dsulo4/ 4<5:  
^ :` Jrrg Exvqhvw1 Vkh Qdvalo P hufxuj 1 P dl 57/ 4<5: 1  
^ ;` Vklvt xr vñ lv dq dvhuwr q p dgh lq d P hufxuj hglv udo=D Frqyhu1 Vkh Qdvalo P hufxuj 1P duf k 63/ 4<5: 1  
^ < D J uhdv Rssruwxqlv1 Vkh Qdvalo P hufxuj 1Mq h 4/ 4<5: 1

Eledrj udkj =

Dufklyhv Frqxvñg  
Dp hufdq Erdug ri Frpp lwrqhw ri Iruhjq P lwrq/ Uhf rugv iru vkh ] xox P lwrq Vshf ldo Fradhvñr qv/ Krxj kvwq Cleudj / Fdp eulj h/ P D1

Qhz vsdshw Xvñg  
Vkh Qdvalo P hufxuj/ Rfvñehu 4<59 Ò Dxj xvñ4<5: +P l furilq ,  
Lodj d avh Qdval Rfvñehu 4<59 Ò Mq 4<5: +Gij lñ}hg iurp P l furilq ,  
Lqglq Rslq l r q/ Rfvñehu 4<59 Ò Mq 4<5: +Gij lñ}hg iurp P l furilq ,

Df hvv

Hglqj wq/ Ddh{ G1 ÒGhøj xhxdv Vñh q lq vkh Uhf hqvw Hslghp lf lq Gxuedq Ò Vkh Mxudori vkh P hglf do Dwrf l d v r q ri Vrxvk Diuf d 66 +4<5: ./ 779077; 1

I uhxqg/ Elaf lqvñghw dgg Rxwñghw= vkh lqglqj Z runqj Fdv ri Gxuedq/ 4<430 4<<31 Sr uwp rxvk/ QK= Khlqhp dqg/ 4<<81

I | ih/ Kdp lwrq K 1lq Vrxvk Diuf d Wgdj / zlvk dq Dffrxqw ri P rghuq Ukrghv d1 Or qgr q=Hyhdñj k Qdvk/ 4<441

J xedv/ Gxdqj1 ÒGhøj xh2Ghøj xh Khp rukdj lf I hyhu= Klwruj dqg Fxuhqvw Vñvñvñ Ò Qryduw lrxqgdvñr Vj psvlvp 5: =Qhz Vñdvp hqvwvñvñj lhv iru Ghøj xh dqg Rvkuh l avlyludb Glvhdvñ +Fklfkhvñu/ XN= Mlqj Z l dñ ) Vr qv/ Ovg/ 5339, / 60491

bbbb1 ÒGhøj xh dqg Ghøj xh Khp rukdj lf I hyhu Ò Fdqf do P l furel r o j | Uhy l h z v / 4426 +4<< ./ 7; 30 7<91

bbbb1 ÒGhøj xh Ò lq Vkh Duerylvñvñ= Hslghp l r o j | dqg Hf r o j | / Y r o l l / h g l v ñ g e l V k r p d v S 1 P r q d v k + E r f d U d v r q / I O = F U F S u h v / 4 < . / 5 5 6 0 5 9 3 1

Kxp skuhj v/ P dj duhw ÒGhøj xh I hyhu= Euhdner qh I hyhu Ò l q S r { / S o j x h v / d q g S h w d h q f h = G l v h d v l q K l w r u j / H g l v ñ g e l N h q q h v k I 1 N l s d h 1 O r q g r q = R u r q S x e d v k l q j J u r x s / 4 <<< 1

K | v o s / M q d v k d q / Ò W ñ d p v k l s H p s l u h = D v l d q / D i u f d q d q g E u l v v k V d l o w l q v k h P h u f k d q w P d u l q h f 1 4 ; ; 3 0 4 < 7 8 Ò M x u d o r i D v l d q d q g D i u f d q V v x g l h v / 7 7 2 4 + 5 3 3 < . / 7 < 0 9 : 1

Nrnhuwr UK/ NF Vp lvkexuq/ dqg P S Z hlqeuñg1 Ò Q h x v d d v l q j d q v e r g l h v w d u k u r s r g 0 e r u q h y l u x v h v l q k x p d q d q g d q l p d o l q v k h X q l r q r i V r x v k D i u f d Ò M x u d o r i l p p x q r o j | / 8 ; + 4 < 8 9 , 6 4 6 0 6 5 5 1

P dl aep / Sdx d Ò Vkh Vuxj j dh iru Vsdfh lq Vñ hqvwñvñ F h q v u j G x u e d q Ò l q V k h S h r s d w F l v = D i u f d O i h l q V ñ h q v ñ v k 0 F h q v u j G x u e d q / h g l v ñ g e l S d x o P d l a e p d q g l d l q H g z d u g v + S r u w p r x v k / Q K = K h l q h p d q q / 4 < < 9 , / 4 0 6 4 1

Suhwr q Ò k | vñ Urehu1 Ò Frqxvñvñg Chlvxuh Vsdfh=Vkh Vñdñgh dw Gxuedq Ò Dqqdov ri Wxulvp Uñhdvñk/ 5; 26 +5334, / 8; 408<91

Uhlq/ D1Z 1 Vdq l v ñ r q d q g S x e d f K h d o k = Z l v k V s h f l d o U h i h u q f h w F r a g l w r q v l q

Vrxvk Diuf d1 Fdshwz q= Mvñ ) Fr 1 OVG/ 4<5: 1

Vr wñ Gldqj/ Ò Ò uñd vñy h G h v v x f v r q = H d u j P r g h u l v w S o d q q l q j l q v k h V r x v k G x u e d q L q g x v u d o j r q h / V r x v k D i u f d Ò M x u d o r i V r x v k h u q D i u f d q V v x g l h v / 5 < 2 4 + P d u f k 5 3 3 6 , / 5 6 8 0 5 8 < 1

Òk l s s l q j U h s r u w = N l d q g l K d u e r x u Ò V k h N h q l d J d j h v ñ / 5 ; 2 4 4 4 7 + G h f h p e h u 5 5 / 4 < 5 9 , / 4 8 6 6 1

X q d v u l e x v ñ g / + U h s r u w r i , Ò G x u e d q P h g l f d o V r f l h v Ò V r x v k D i u f d q P h g l f d o U h f r u g / : 2 4 3 + P d l 5 6 / 4 < 4 7 , / 4 9 ; 0 4 9 < 1

Z r u a g K h d o k R u j d q l } d v r q / Ò G h o j x h 2 G K I = I u h t x h q v ñ D v n h g T x h w l r q v Ò J h q h y d = Z r u a g K h d o k R u j d q l } d v r q / 5 3 3 9 1 D f f h w h g r q D s u l o 5 7 / 5 3 4 5 1 k w s = 2 2 z z z 1 h d u r t z k r 1 q v 2 h q 2 v h f v r q 4 3 2 v h f v r q 6 6 5 2 v h f v r q 4 3 5 9 1 k v p

Z r u a g K h d o k R u j d q l } d v r q / Ò p d a s s r { I d f w k h h v Ò J h q h y d = Z r u a g K h d o k R u j d q l } d v r q / 5 3 3 4 1 D f f h w h g r q D s u l o 4 ; / 5 3 4 5 1 k w s = 2 2 z z z t z k r 1 q v 2 p h g l d f h q v h 2 i d f w v k h h w 2 v p d a s s r { 2 h q 2

# P hglf lq P dwdf kxvhw

## Gu1 J duadqg dqg Sq p r x vk K r v s l v d o

Ddvr q Eduqhw  
Vr x vk Hqg Klvw uldq

Ddvr q Eduqhwkdv dyhg lq Erwrq Vr x vk Hqg Vlfh 4<97/ p r w r i v k d w l p h r q H d w V s u l q j i l h a g V w h h w l v k h l v d j u d g x d v h r i E r w r q X q l y h u l v y d a g j l y h v w x u r i v k h V r x v k H q g d a g E X P F d u h d 1 V k h l v v k h d x v k r u r i H { w d y d j d a g } d N l a j / U r e h u w E d u q h w d a g E r w r q P x v l f d o V k h d v h u d a g V r x v k H q g F k d u d f v h u = V s h d n l a j R x w r q Q h j k e r u k r r g F k d a j h 1

**Z** khq Gu1 Fruqhdv Q1J duadqg duulyhg lq Erwrq lq 4<36/ kdylaj sdwhg vk P d w d f k x v h w w a l v h e r d u g v z l v k k l j k k r q r u / k h x q g r x e v h g d h { s h f v h g w i l q g s u r i h w l r q d o r s s r u x q l w h v 1 K h k d g j u d g x d v h g i u r p C h r q d u g P h g l f d o V f k r r o d w V k d z X q l y h u l v y l q U d d h j k / Q r u k F d u r d a d l q 4 ; < / r a h r i v h y h u d o V r x v k h u a e a d f n p h g l f d o v f k r r o v k d w l q w l a d h g l q v k h l u w x g h q w d w u r a j v h q v h r i p l w l r q / d a g k h k d g n a w u h v u q h g i u r p g r l a j s r w j u d g x d v h z r u n l q r s h u d v l y h v x u j h u j d w O r q g r q X q l y h u l v y / v s h f l d d } l a j l q v k h g l v h d v h r i z r p h q d a g f k l a g u h q 1

Erwrq z dv d v p d o e a d f n s r s x a d v r q D f h v r

dqg d juhdu ghdo ri suhnglfh1 Erwrq Flv Krvslvdo z klfk kdq surxgd rshqhg lq 4;97/ glgqvr dgp lweadfn grfww ru qxuvh iru wdlqlaj 1 Z khvkuh vkh krsvlvo whdvhg eadfn sdwhqwlvxqfhdur

Gu1 J duadqg z dv erua lq Dadedp d dqg Oz runhg klv z dj xs iurp kxp edh ehj lqqlaj v/O dffruglaj w juhduj udqgvr q Gdq Uhsshur ri Qruk Fdurdaqd1 Dv d lrxaj pdq dw Vkdz Xqlyhuulv/ J duadqg z dv d vnlathg dvkdvhl/ sadlaj r q vkh iluwweadfn irrvedo vndp > lq klv vha lru | hdu kh z dv suhvlghq w ri Vkdz v Dvkdvhl Dwrflvtr q1

Gxulaj klv iluw | hdu lq Erwrq/ Gu1 J duadqg dyhg dqg sudvflhg p hglflqh lq vkh plggd0

faw eadfn frppxqlv vkw r qfh hflwng r q Gduwr xvk dqg Exfnlaj kdp wuhhw qhdu vkh Edfn Edj udlardg wdlvtr q1 lq 4<3; / kh erxj kwd vp daerz kr xv h dw45 Hdw Vsulaj ilhag Vuhhw lq vkh Vr x vk Hqg dqg rshqhg Sq p r x vk K r v s l v d o d a g Q x u h v x W d l q l a j V f k r r o d Z k l v k h q d p h S q p r x v k l v x q n q r z q 1 D w k h v l p h / v k h u h z h u h i h z h u v k d a v z h q v e a d f n k r v s l v d o / q r w f r x q v l a j g u x j w w u h v / l q v k h h q v u h f r x q v l 1

HdwwVsulaj ilhag Vuhhwlv d wnh0dqhg eadfn ehvz h h q Z dvklaj w r q V u h h w d a g K d u l v r q D y h q x h z k h u h l w p h h w E r w r q F l v K r v s l v d o S q p r x v k K r v s l v d o z d v f a v h u w Z d v k l a j w r q V u h h w l q v k h h d u d 4 < 3 3 v / v k h p d m u l v y r i s u r s h u l y r z q h u w r q H d w V s u l a j i l h a g V u h h w

z huh Lwlvk/ z lvk vrph Hdvhnuq  
Hxurshdq Miz v/ dagg vkh Vrxvk Hqg  
dv d zkrch z dv d pl{ ri Lwlvk/  
Fdqgdldq/ Vj uldq/ Chedqhv/ Juhn/  
Jhup dq dagg Hdvhnuq Hxurshdq  
Miz lvk lpp lju dqw  
Ó d ælj h ægj lqj  
krxvh glwulfw z lvk  
p dql fkdulwhv dgg  
vhwhp hqw krxvhv1  
Eæfnv/ z kr kdg  
p ryhg iurp Ehdfraq  
Klæ lq vkh 4; <3/  
vhwhng lq vkh xsshu  
Vrxvk Hqg dgg  
Orz hu Ur{exu 1  
Z klch rvkhu vp dæ  
krvslvæ vkwdehjdq

D |rxqj Gu1 Jduæqg1

lq vkh Vrxvk Hqg Ó Fklæghq  
Krvslvæ Qhz Hqj ædgg Ghdfraqhv/  
dgg vkh luh Krvslvæ iruz rp hq Ó  
p dl kydh ehqihlwhng iurp vkhlu  
sur{lp lvy w ÔFlvy/Ô Sdprxvk  
Krvslvæ frxæg qrvl Jduæqg p dl  
kydh fkrvhq vkh æfdvraq ehfdxvh  
vkh H/ dq hdydvng vadlq vkwvvelwhng  
uxqq lqj grz q Z dvklqj wq Vvhhw lq  
4<34/ p dghiruhdv| dffhv1

Óvkh krvslvæ z dv  
hwædvkhg w p hhwvkh lqfuhdv lqj  
ghp dgg iru krvslvæ  
dffrpprgdvraqv/ z khuh fræuhg  
sk| vfldqv p lj kwgl dj qrvh dgg vhdw  
vkhlu rz q fdvhv/Ô z urvh Z 1 Q1  
Kduwkr uq/ d grz qwz q sxedvkh  
z kr krwhng d 4<3; frqihuhqfh r q  
vkh surjuhri ri vkh Óp hufdq  
Qhj ur Ô dgg sxwrxd khivj errn  
ixæ ri elrj udsklfdo lqirup dvraq Ô  
Vkh krvslvæ lv fkdulwhng el vkh  
wævh dgg lv rshq w dæz kr duh lq  
qhng ri phglfdo ru vxj lfdo fduh/  
uhj dugdhw ri udfh/ fræu/ ru  
uhdj lrq Ô Kh qrvng vkwæ dækrxjk  
krph ylvw kdg ehq p dgh w Ó  
qxp ehuri z klvñ sdvhqw Ô lq  
Sdprxvk Krvslvæ iluw | hdu/  
Óqhduj dævkh z run z dv dp r qj vkh  
fræuhg shrsd Ô 4

lq d 4<47 uhsruw Gu1  
Jduæqg ghvfulehg Sdprxvk  
Df hvr

Krvslvæ dgg Qxwhvx Wædlqlqj  
Vfkrro dv Ó sulydvñ lqvlwvraq  
vxssruwhng vrhdq el vkh yrxævduj  
frqvæxvraqv dgg ufhls w iurp  
vkrvh sdvhqw z kr duh dedh w sdj  
vrp hvklqj Ô l urp 4<3<  
w 4<47/ 468 p dch dgg  
78: ihp dch sdvhqw  
z huh dgp lwhng1 Dv kh  
z dv d vxj hrq/ vxj lfdo  
sdvhqw z huh vkh  
p dmulvy/ dgg vkhuh  
z huh p dql dsshqghf0  
w p lhw/ k| vhwufw p lhw/  
dgg w qvlæhf w p lhw1933  
shrsd/ lqfæglqj  
fklæghq/ z huh vhhq lq  
vkh iuhh rxvæsdvhqw

ghsdw p hqw dgg 533 fdhg iru el  
qxwhv grlqj Ó uhh Glwulfw Z run  
ru krph ylvw Ó qv vkh krph ri  
vkh srrudqg qhng | Ô 5

Óvkh iuhh glwulfw z run lv  
z lvk vkrvh z kr duh qrvlq srvlvraq  
w sdj iru qxwh fduh/Ô z urvh  
Kduwkr uq1 Ó uht xhqv vkh qxwh  
fduhvh ehg dqhg dgg rvkhu p dvhu do  
z khuh vkh qhng lv lp shudvlyh1 Vkh  
phglflqhv duh ixuqlvkhg iuhh w  
vkhvh glwulfwsdvhqw/ dgg vkhuh duh  
p dql hylghqfhv ri judvni xo

4<4304<44 fæwri vkh Qxwhv\* Wædlqlqj Vfkrro

dssuhfldvraq Ô

Væ hqv/ Oz r |rxqj z rp hq  
ehvz hq vkh dj hv ri 4< dgg 68  
uhj lwhng dwvkh Qxwhvx Wædlqlqj  
Vfkrro vkh iluw | hdu1 Óvkh vfkrro  
z dv rshq w dæ z kr srwhv

judp pdu vfkrro hgxfdvraq dgg  
sk| vfldo fdsdflvy w xqghur vkh  
vwhqrxv dih z klfk qhfhwduj  
dffrpsdqlhv vkh surihvraq ri  
qxwh/Ô z urvh Kduwkr uq1

Vkh frppxqlvy vxssruwhng  
vkh krvslvæ z lvk æfdo uhvlghqw/  
fkxufkhv/ dgg vhwæp hqw krxvhv  
grqdv lqj eælnhw/ er wæhv/ uxj v/ vhd  
nhwæhv/ vdxfh sdqv/ qlj kvj rz qv/  
errnv/ p dj d| lqhv dgg/ lq vkrvh gdl v  
ri iæz hu plvraqv/ fxw iæz hu1  
Fkxufkhv p dgh uhi huæv1

Rqh ri vkh nhj v w vkh  
vxffhw ri eæfn grfw w dwvkh vlp h  
z dv lqyryhp hqw lq surihvraqdo  
dvr fldvraqv/ vxk dv vkh Edj Vævñ  
Phglfdo Dwr fldvraq/ irxqghg el  
eæfn grfw w/ ghqvw w dgg  
skdup dflw lq 4<631 Eæfn grfw w  
z huh dedh w p dnh lqur dgv lqw vkh  
P dvdfkxvhw P hglfdo Dwr fldvraq/  
irxqghg lq 4; > Gu1 Jduæqg  
ehfdp h ylfh suhvlghqvl Z khq vkh  
Qdvraqdo Phglfdo Dwr fldvraq/  
z klfk uhsuhvqhng Diulfdq0  
Dp hufdq sk| vfldqv dgg sdvhqw/  
khæ l w dqqxdop hhw lqj lq Erwraq lq  
4<3</ p hp ehwkls lqfæghg 683  
eæfn sk| vfldqv/ vxj hrqv/ dgg  
skdup dflw1

lurp vkh lqfhsvraq ri  
Sdprxvk Krvslvæ Erwraq eæfn  
flylo uj kw chdghu Z lædp Prqurh  
Vur wñu z dv rssrvhg w d udfldæj  
vhj uhj dvng krvslvæ dgg z urvh  
dj dlqw lw lq Vkh Jxdujldq

ghz vsdshu1 Z khq/ dqp rww vz hqv  
| hduw advnu/ Gu1 J duadqg sadqghg w  
h{sdqg Sq prxvk Krsvlalo w  
Ur{exuj/ Wlr wnu/ klv vlvnu P dxgh  
Wnz dug/ dqq surplqhqw eadfn  
grfwu Z laadp Z ruwk| dqq Z doinu  
R1Wd| arerhfvng>vkh| z huh lqvhwq

rqlvni udvqj Erwvq  
Flv Krsvlald1^6`

Wkrvh pxw  
kdyh ehq wuhwixo  
vlp hv1 Gu1 Z ruwk|  
dqq Wd| arukd ehq

rqlvni Sq prxvk Krsvlaldov p hglfdo  
wadi iru | hduw1Wd| aru/ dv d vaxghq  
kdg urphg zlvk vkh J duadqg  
idp lq1 Ervk z huh j udgxvnuv ri vkh  
Frathj h ri Sk| vflidqv dqq Vxj hrqv  
rqlvni Vkdz pxw Dyhgxh/ naxw durxqg  
vkh fruhul J duadqg x sadq z dv  
qhyhuudd}hg1

Gu1 Z ruwk| x gdxj kvnu  
P | uwh z dv txrvng lq Eadfn Erwvqld  
^4<: 9= O vhfraq Qudv/ vj uhj dvng  
krsvlaldov dv qrwz kdwp | idvkhuru  
P u1 Wlr wnu z dqvng ^1ff d krsvlaldov  
iru vkh fruhg O W dxvkru Odqfh  
Fdughq/ vkh dgghg/ O dqq lwz rxag  
p hdq hyhqvadq vkwvkh fruhg  
z rxag eh vxw rxw ri vkh Flv  
Krvslaldov dqq vkh fdqfv dqq vhw  
vkhuh O

Ur{exuj flylf dhdghu  
Phaqhd Fdw h{suhwhg dqr vkhu  
ylhz z khq vkh z dv txrvng lq Eadfn  
Erwvqld1 O J duadqg` z dqvng d sadf h  
z khuh fruhg shrsch frxag jr dqq  
iuhd wdlq ^1ff Z h qhghg vkwv  
krsvlaldov li z h kdq sxwrxu irufhv  
ehklqg lw z klv dqq eadfn z rxag  
kdyh jr qh vkhuh ^1ff D prqxp hqww  
eadfn shrsch x lqj hqxlv O ^7

Divnu dq h{fkdaq h ri sr dvn  
dvwnuv zlvk vkh vxshulqvhqghqw ri  
Flv Krsvlaldov lq z klfk Wlr wnu  
jurxs wuhwhg vkh dnj do ujkw ri  
vz r eadfn z rphq z kr kdq dssdhg  
w lw Wdlqlqj Vkrroiru Qxuvh O  
z klfk z dv/ divnu daad sxedf  
lqvwxvtrq O vkh z rphq z huh  
Df hvr

dgp lwhg lq 4<5<1 lq 4<64 Gu1 Mka  
KdoolL ehf dp h vkh iluweadfn lqvnuq  
w wdlq vkhuh/ exwlwz dv qrwvqvw  
4<7< vkwvkh iluweadfn sk| vflidq/  
Gu1 Fkdudv Erqqu/ z dv dssrlqvng  
w vkh wadii1

Sq prxvk Krsvlaldov fsvng  
lq 4<5; 1 Gu1 J duadqg  
z dv kdugd rxw ri  
exvlqhw/ krz hyul  
lru | hduw/ kh kdq  
ehq lq sulydvn  
sulfvfh dw558 Z hww

Fdqwq Wuhhw lq vkh Vrxvk Hqg/  
z klfk z dv dor klv krp h1 lq vkh  
4<63v/ kh/ klv z lih P dj jlh/ dqq  
gdxj kvnu Vkhq d pryhg w 4:6  
P dvrq Wuhdfh lq Eurndq/ z klv  
klv riilfh uhp dlqhg rqlvni Fdqwq  
Wuhhw Vkh| dor kdq d frpirwledh  
vxpphu frwaj h lq Rdn Exiiv rqlvni  
P duxdx Ylqh| dug/ z khuh vkh  
idp lq z dv sdw ri vkh Ylqh| dug  
vrfldo vfhqh1 Gu1 J duadqg z dv vkh  
iluweadfn p dq w mlq vkh HdwwFkrs  
Ehdfk Foxe/ dqq klv gdxj kvnu  
Vkhq d z dv rqh ri vkh irxaghu ri  
vkh Frwaj hu/ d  
jurxs ri eadfn  
z rphq vkwdfvlyh  
lq fkdulwledh  
dfvylwv rqlvni  
lvadqg1 Vkh idp lq  
vshqw hyul  
vxpphu dw Rdn  
Exiiv iurp 4<54  
w 4<85/ vkh | hdu  
Gu1 J duadqg glhg/  
vhdqj vkh frwaj h  
rqlvni zlvklq vkh  
adwvz rghfdghv1

lq 4<7</  
Herq| pdj d}lqh

udq d skr w ri Gu1 J duadqg dqq klv  
j udqggdxj kvnu Mdq fdsvtrqhg/ O Gu1  
J duadqg/ Erwvq xw ufkhwvsk| vflidq/  
lv yhvudq dw Rdn Exiiv vxpphu  
frsq| O lvglgq xwvd| ufkhweadfn  
sk| vflidq/ lwvdlg ufkhwvsk| vflidq1  
Vkh fdsvtrq dor vdlg/ O Qrz dw

Udgdiih Frathj h/ Mdq kdq euladq  
ghexwadw| hdu O ^8`

Mdq/ dnh khu| rxqj hu vlvnu  
Mfhq dqq vkhlu prvkhu Vkhq d/  
z hqww Udgdiih Frathj h1 Z khq vkh  
p duvhg d Kdudug surihwv u O w  
z dv vkh eljj hww vrfldo lqvnuadfn  
hyhqw dw vkh vlp hv O vdlv d ardo  
z rpdq z krnqh z khu z hoo dqq  
ylvng Rdn Exiiv dqq P dvrq  
Wuhdfh1 Vkh uhp hp ehv vkh gd| Gu1  
J duadqg erxj kwd qhz Sdfndug dqq  
glvfryhng lw z rxag xw ilw lq vkh  
j dudj h1 Mdq dqq khu kxvedqg  
pryhg w Rklr/ z klv Mfhq d  
p duvhg d grfwu dqq pryhg rxw  
z hwd

Vkhq d vkrxj kw ri khuh  
dv d O adsshu O dffruglqj w khu  
j udqgv rqlvni Gdq1 Vkh kreer eehg zlvk  
ydlrxv qvledh ri eadfn vrfhwv/  
lqfoxglqj \ radqgd Gxerlv/  
gdxj kvnu ri Z HE1 Gxerlv O  
Vkhq d z dv lq khu z hgg lqj sdw  
O dqq ludqn Kruqh/ d Kdudh  
uhqdlwdqfh z ulvnu dqq xqfch ri  
O qd Kruqh1 Kruqh ghglfdvng d

Wderudq Z dug/ Sq prxvk Krsvlaldov ixuqlvkhg el vkh Vz hgh  
Nqlj kw dqq Gdxj kvnuv ri Wderu1

srhp w Vkhq d/ xvlqj khu  
qlfnqdp h Wdh/ dqq lw z dv  
sxedvkhg lq Vkh Fulv p dj d}lqh1  
O Wkdwz dv p | j udqg prvkhu/ d ixq  
shur q/ O vdlv Gdq1 ^9`

D Eadfn Khulvqj h Vlv  
sadt xh z dv sxw rqlvni Hdww

Vsulqj ilhag Vvhhw exlqglqj gxulqj Dp hulfdx Elfhqvlnqldola 4< 9/ exw lv hdv| w p lw iru dævkhl y| 1Qrz dsdwp hqw/ vkh vp dæ qduurz kr xv h lv uhædvlyhq xqfkdqj hg iurp Gul J duædqg x gd| 1Wkh iurqwur rp r q vkh iluwia rru vkææ rrv dn h Gul J duædqg x riilfh/ p lq xv vkh

rshudvqj urrp vn| dj kw uhp dlqv1 Rvkhu vp dæ krsvlvæv lq vkh duhd vkdwvælvng lq urz kr xv h v dæv kdg vkhlu rshudvqj urrp v r q vkh w s iæ rru iru vkh dj kw/ dqg væli kdg w fduj sdvhqw xs dæ vkh vælvw Ó xqgrxevngd sduwri Ôkh wvhqrxv di h z klfk qfhhvævulq dffrp sdqlhv vkh surihvtrq ri qxuvh1

Sq p r xvk

Krsvlvæv lv qr w dqflhqw klwv uj z khq | r x frqvlg hu vkdw shrsch væv dylqj z huh vhdvng el Gul J duædqg1 Ulfkdug Eur z q ri Vthp r q w Vvhhw/ iru lqvædqfh/ qrz lq klv ævln hlj kvhv/ vdz Gul J duædqg z khq kh z dv d fklqg1 Ô

Gul J duædqg\*viluwia rru riilfh1

Ylfwuldq dj kw il{vkvhv dqg Gul J duædqg x sr wædlwk dqj lqj ehvz h hq vkh erz z lqgrz v1Wkh vklug iæ rru lv dæv uhfrjql}ædch dv vkh Vævæv uld q z dug/ ixuqlvkhg el vkh Væ hqyh Nqljkw dqg Gdxj kvhv ri Vævæv/ r qh ri vkh vhf uhvvr flhv hv ri z klfk Gul J duædqg z dv d p hp ehul Dækrxjk vkh urrp v r q vkh irxwæv iæ rru kdyh ehq uhfrqilj xuhg/ vkh

j uhz xs z lvk d exqfk ri khur hv/ Ô kh vd| v1



Wkh deryh skr wv du h iurp Z 1 Q1 Kduwkr uq/ hg1 Dq Hud ri Surjuhw dqg Surp lvh/ 4; 9604<43/ Wkh Uhdj lrxv/ P rudd/ dqg Hgxfævtrqæv Ghvhæsp hqw ri vkh Dp hulfdq Qhj ur vqfh Kl v Hp dqflsdvtrq1 4<431

Qr vlv=

14` Kduwkr uq Z Q/ hg1Wkh Fæivw q 1P D` Frqihuhqfh/ Dq Hud ri Surjuhw dqg Surp lvh/ 4; 9604<43/ Wkh Uhdj lrxv/ P rudd/ dqg Hgxfævtrqæv Ghvhæsp hqw ri vkh Dp hulfdq Qhj ur vqfh Kl v Hp dqflsdvtrq1 Er wv q/ P D= Sulv læv Sædvklqj Fr > 4<431

15` J duædqg FQ1Uhsruwri vkh Sq p r xvk Krsvlvæv dqg Qxuvhv x Wædlqglqj Vfkrræv 4<471

16` Wkh J xduglqj/ z klfk z dv Er wv q x eæfn qhz vsdshu/ z dv frærxqghg el Z lædp P r qur h Wæv wlv lq 4<341Wæv wlvu z dv vkh hglwæv

17` Er wv q 533 Fr usruvtrq1 4< 9,1Eæfn Er wv ql d1

18` Herq| P dj d|lqh1Mq 4<7<=751

19` Wkh Fuvv/ dq riilf l d op dj d|lqh ri vkh Qævtrqæv Dwr flævtrq iru vkh Dgydqfhp hqw ri Fræuhg Shrsch -QDDFS,/ z dv irxqghg el Z 1E1 Gx Er lv lq 4<431Lwz dv d p dmuyhklfæv iru wæv uhv dqg srhpv el eæfn z æv hv gxulqj vkh Kduvhp Uhqdlvædqfh1

### I urp vkh EXVP Dufklyhv

Wklv lv d 4<6< skr w ri Er wv q P hglfdo Fhqvhu v Grz dqj Exlqglqj 1 Wkh exlqglqj z dv frp sdvng lq 4<6: iru' 49 p læv r q1Lwkdg 5;; ehgv dqg 47 rshudvqj urrp v lq lw < wæv uhv1 Wægd| / l wkr xv hv p r wæv riilfhv1

# P hglf do Hgxf dvr q

## Oder ulqj dqg Ohduqlqj lq vkh Dp hulfdq Uhlghqf | = Edæqflqj Hgxf dvr q dqg Vhuylf h lq vkh Qlqhwhhqv Fhqvx ul dqg Wgdj

Dyudkdp j 1Frrshu/ P G  
Lqvhuqdo P hglf lqh Uhlghqf  
Ehvk Lvudho Ghdf r qhv P hglf do Fhqvhu

Gdylg K1Ur ehuv/ P G  
Dvvr f Idvñ Sur ihvvr u ri P hglf lqh/ Kduydug P hglf do Vf kr r o  
Dvvr lf dvh GIhuf w u/ Fduo Ml Vkdslur Lqvwhvñ vñ ir u Hgxf dvr q ) Uhvhduf k  
Ehvk Lvudho Ghdf r qhv P hglf do Fhqvhu

**W**kh kdyh ehq vhyhudo h fkdokdu vkh lq vkh Dp hulfdq Uhlghqf | = Edæqflqj adqgvdsh lq vkh ævw 483 | hdu/ lqfæglqj vkh Rvdudq uhyrævvr q dw Mkqv Krsnlqv lq vkh 4; ;3v/ vkh æderu glvsxvñv ri vkh 4<93v/ dqg/ pruh ufhqvæ/ vkh duydori z run kr xv uhvvlvvr qv dqg frpshvñqf | dffuhglvævvr q dqg vkh Plðhvvr qhv z lvk vkh Qh{w Dffuhglvævvr q Vj vñp/ ghðqhdvng ej vkh Dffuhglvævvr q Frxqfloiru J udgxdvñ P hglf do Hgxf dvr q 1 Vkh udslg sdf h ri fxuuhqwdqg suhglfvng fkdqj h lq khðvfkduh ghdyhul prghov ðh1 1 sdj Ar uðshuir up dqf h/ sdvñqv0 fhqvñuhg p hglf do krp hv/ dffrxqvædch fduh r uj dql} dvr qv/ hvñ1 vkrxæg eulqj derxw ixuukhu ædj h0f dch vkh lq krz j udgxdvñ p hglf do hgxf dvr q ð P H, lv vkdshg lq vkh lvr xqvæ/ z lvk qhz hp skdMv r q dp exævruj vwlqlqj dqg vkh vñdf klqj ri ydæxh0dgghg fduh1^4  
Dv z h dssurdfk vkh lq qhz

shurg z lvk dqvflsdvng fkdqj hv/ vkhuh lv ydæx lq uhrqvlgulqj r qh ri vkh ixqgdv hqvæo gxddvñv xqghuslqqlqj Uhlghqf | vwlqlqj 0 vkh lqvæqvlf vñqvvr q ehvz hhq Uhlghqf dv æderuhv dqg dhduhu1 Rq vkh r qh kdqg/ Uhlghqf duh uhvsvqvædch iru khæslqj krsvlævæ uxq r q d gdj Or Qgdj edlv/ z khvku lwlv vr fdæhg Ôfvx0 z run ru vkh frjqlvñyhd frpsd{ dvshfv ri sdvñqv fduh1 Rq vkh rvkuh kdqg/ Uhlghqf | surj uð v duh uhvsvqvædch iru vwlqlqj vkh p ehfrp h frpshvñqv fduh1 dqv/ vñdf khv/ dqg rivng vkræw/ z lvk ervk fdqf do h{shulhfh dqg glgdfw fvuifxæ1 Vkh glfkrwp | lqirup v hyhul dvshfvri d Uhlghqf z run dih1 Lq hiihf w vkhuh h{lvw d vrfldofr qvædfw ehvz hhq surj uð v dqg Uhlghqf 1 Lq h{fkdqj h iru ghilqhg lqfrp hv/ khæslqj vkh krsvlævæ ixqvvr q lq dq hiihf lhw p dqghv/ dqg vñdf klqj æqlru fdqf lqv 0 ervk æqlru Uhlghqf dqg p hglf do vxghqv 0 krsvlævæ vwlq dqg jlyh vkhlu

lp sup dvxuvr Uhlghqf 1 Klwv uðdq Nhqqhvk Oxgp hukuðv ærnhg h{vñqvlyhd dw vkh lq gl qdp lf lq ævñ qlqhwhhqv dqg hduq Qp lg vz hqvñvk fhqvæ ul vwlqlqj surj uð v1 ^5 Iurp vkh Rvdudq vdwvlvvr q w prghuq Uhlghqf | surj uð v lq vkh ævñ 4; 33v r qz dug/ krsvlævæ dqg dffuhglvævvr q erghv kdyh z uhvng h z lvk ilqglqj vkh rsvp do edæqf h ehvz hhq Uhlghqvæ æderulqj dqg dhduqlqj 1 Qrvæd/ vkh glfkrwp | suhgdvñv hyhqv vkh hduhvvir up do Uhlghqf | surj uð v/ kdy lqj ur r w dv idu edfn dv vkh srw0dssuhqvlf h hud lq vkh hduq qlqhwhhqv fhqvæ ul 1 Dw vkh hqg ri vkh hlj kvñhqv fhqvæ ul p hglf do dssuhqvlf hvklsv z huh vkh qrup > lqglylqdo sxslæv z rxæg dhduq dw vkh vlgh ri lqglylqdo fdqf lqv1 ^6 E l vkh qlqhwhhqv fhqvæ ul / z lvk vkh uvh w surp lqhqf h ri vhyhudo xqlyhuivvæ dvhg p hglf do vkræv/ srw0 udgxdvñ kr xv skj vlfldq dqg kr xv vxj hrq srvlvvr qv sur dihudvng1 Vkhv

wadlqhv vhuylg vpladu urdhv dv  
prghuq uhlvghq/w wadiilqj z dugv  
daq fdulqj iru sdvhwqw xqghu vkh  
vxshuylvrq ri wadii sk| vflldqv1

Z lvk vkh duulydo ri  
irup dd}hg krxxv sk|vflldq daq  
krxxv vxj hrq srvtvr qv lq vkh hduj  
qlqhvnhqvk fhqvxuj / lq flvhw vxfk dv  
Qhz \run/ Erwvq/ daq  
Skldghaskld/ vkv ader uhu2 dnduqhu  
glfkrwp | ehfdp hfuj wad}hg1 Rqh  
p dqlihwvvrq z dv vkh gd| Ov Qgd|  
vfkghxch uhlvghqw z huh dvnhg w  
z run1 Qlqhvnhqvk fhqvxuj krxxv  
sk|vflldqv z runhg hwhqvdad  
frqvlqxrxv vkiw/ dv d uxch uhlvlgaj  
lq vkh krsvlval rivng z lvk dwdh ru  
qr sd| Oprwkrsvlval kdg rqq  
rqh ru vz r krxxv wadii1 Lqghhg/ vkh  
ghvj qdvvrq ri Qhvlghqv0 ghulyhv  
iurp vkh idfvkdwvkh sk|vflldqv lq  
wadlqaj dyhg rq vkh vlvhv ri  
vndfklaj krsvlval1 Wf z dugv vkh hqg  
ri vkh fhqvxuj / z lvk vkh duulydo ri  
hdfvlf djkw daq ehwhu vxj lfd  
vfkqlt xhv/ wuxd vz hqv| Orxu krxu  
fdh frxag eh ghdyhuhg1 Vrp h  
krxxv wadii z huh dvnhg w p dlqvllq  
vkh krsvlval Qndfvlf daq j daydqlf  
dssdudv daz dl v lq shuif wr ughu0  
^7 ru w ixqfvvrq dv vxj lfd  
vfkqlf lldqv ru h| riilfr deudldqv lq  
dggvlvrq w sdvhwqfduh gxvhw1 ^8  
Rvkhv Qvdz` vkw vkh p hglflqh  
vhqw w vkh vifn ^z huh` uhj xaduj  
vnhq/0 ryhuvhlqj qxwllqj sudfvlf  
daq sdvhwqgdgkhuqh/h ^9` daz kldh  
fdulqj iru dv p daj dv vhyhqv| Alyh  
sdvhwq dwd vlp h1

Wkh vnvqvrq ehvz hhq  
uhlghqwxgxcour dhv dv ader uhv daq  
dnduqhu kavxw ehq gloxvng z lvk  
vlp h1 Urxvlqh z run vkw uhlvghqw  
gr hyhu| gd| w hqvux dhgt xdvh  
z runiaz lv d gluhfwdqdrjxh w  
vkw ri vkh qlqhvnhqvk fhqvxuj1  
Z kldh Qnduqlaj el grlaj 0 lv d  
fhqwdo JPH vnhw/ p daj vlvnv  
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frqvdfw vkw h|lvw ehvz hhq  
krsvlval2 uhlvghqf| surj udp v daq  
krxxv wadii1

Dw vkh vdp h vlp h/ lv lv  
z rulk qrvlaj vkw vkh urdhv ri  
ader uhu daq dnduqhu duh qrw  
p vxvda| h{foxvlyh1 Lq rughu w  
dwdlq vxiilf lqhw h{shuhqf h daq w  
dfklhyh xqghu wadlqaj daq  
h{shuwh/ udvku vkw dx rrvw  
nqrz chgj h ru idp lddulv/ dnduqhu

p dl uht xlvh hqj dj hp hqw lq vlvnv  
z klfk pljkwihho dnh ader ulaj exw  
kdyh fndu dnduqlaj ydoxh1 D  
uhlghqw fdq eh Qader ulaj 0 0 iru  
h{dp sd/ uhfrqf lldaj d sdvhwqw  
p hglfdvvrq ru vhdvvlaj frqj hvlv  
khdw idloxh iru vkh 433vk vlp h0  
z kldh dw vkh vdp h vlp h dnduqlaj =  
h1 1 ilqglaj qhz daq lqvwxvlyh  
qxqdfhv lq hyhu| fdv ru ehfrp lqj  
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glvryhuqlaj krz w frp sdvhw vlvnv  
hiilf lqhw1 Wkh wvuj ri vkh  
hyrovlvrq ri uhlvghqf| surj udp v  
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ylhz hg dv d frpp hqvdu| rq vkv  
fhqvudogx d d v1

Hqkdqf hg ryhuvljkw daq  
qhz uhj xadvrq v kv dyh dfv d d p dg  
vkh glfkrwp | ehvz hhq uhlvghqw dv  
ader uhv daq dnduqhu pruh  
surplqhqw daq wadqvsduhqw ehqj  
ixuwxh frp srqxqgh el lqf uhdvng  
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vad adglaj w vkh fdqlfdo exughq,  
daq lqf uhdvng uht xlvh hqwr iru  
grfxp hqvvrq ri vndfklaj daq  
dnduqlaj1 Ixuwk hup ru/ idfxvly  
h{shuhqf h daq d d rjrxv vsdw  
ehvz hhq vkh lu gxvhw dv fdqlf do  
surylghw daq hgxfdvvrq1 Wkhu  
lqf uhdvng fdqlfdo adg/ daq  
lqf uhdvng uhsvrqlvldvhw iru  
hylghqf h Qedvng hgxfdvvrq do  
rxvvrp hv lv lq p daj z dl v d p luu  
lp dj h ri vkh rivng qf r qidvng  
gx d d v idf lqj uhlvghqw1 Z kldh sdlg  
iru vkh lu fdqlfdo aderu vkrxjk  
uhvlyh ydox xqlw/ vkh| kdyh  
udvuh ehq frpshqvdlvng iru  
vndfklaj daq dnduqlaj / z klfk lv dvr  
frqvlgvuhg da krqr lq prw  
vndfklaj krsvlval1

Wkh hyrovlaj wadlv ri  
Dp hufdq khdk fduh/ daq vkv  
JPH/ z ladvuhd sxwqhz wuhvrq  
vkv vrlido frqvdfv1 Dv ader uhv/  
uhlghqw adag uhlvghqf lvh, z ladv  
qhng w dgds w vkh fkdaj lqj  
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rj daj} dvvrq1 Wklv z ladv uht xlvh  
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dp exad v duhq daq sr vnhqvlad  
qhfvvlv v survfvng vlp h iru  
uhlghqw w sudfvlf lq vkh  
rxv sdvhwq vhwvlaj1 Dv dnduqhu/  
uhlghqw z ladv qhng/ daq uhlvghqf lvh  
z ladv eh uht xlvh w surylgh/  
dggvlvrqdo wadlqaj lq surylvrq ri  
ydoxh Qggghg fduh/ t x d d v p h v f v  
daq sdvhwq vdi hv1 Wf p h h v vkh v h  
qhngv/ vkh idfxvly z ladv uht xlvh

dggvlvrqdo wadlqaj w surylgh vxfk  
hgxfdvvrq lq d qhz d irup hg vj vnhp  
z lvk z klfk vkh| kdyh dplvng  
h{shuhqf h1

Z kldh uhlvghqf| lq vkh  
vz hqv| Qluwv fhqvxuj z ladv lq p daj  
z dl v qrw uhlvhd z kdw fdp h  
ehiruh/ vkh vnhqvrq ri uhlvghqw dv  
ader uhu daq dnduqhu z ladv d d r w  
vxuhd uhp dlq1 Lvlv qhvlvku qhz / qru  
vlp sd d surgxvvrq vkh Rvdudq  
uhlghqf| 1 Lvk dv idu hduhu urrw lq  
Dp hufdq p hglflqh daq  
xqghu wadlqaj vkrv urrw/ daq  
dssuhf lldv vkh lp sdfvrq prghuq  
khdk fduh rq vkh uhlvghqw dv ervk  
dnduqhu daq ader uhu/ z ladv hqvuh d  
vprvrkvu wadqvlvrq w vkh qh| v  
j hqvudvrq ri uhlvghqf|  
surj udp v1



Dfnqrz chqj p hqv= Wkh dxvkrw z rxag dnh  
w h{shw vkh lu j uvlvng w Guflvrw  
Srgvnl/ Guflvkdug Vfkz duylvnlq/ daq  
Guflvqh Ehuvlq iru vkh lu vxewdqvlyh  
daq vkrxkvxo frqvlevvrq w vkh  
irup xadvrq daq hglvlaj ri hduhu yhuvrq  
ri vkv duvlv1 Wkh dvr z rxag dnh w vkdq  
P uvlvrn Hfnvvrri vkh lu dqv lv D1 Frxqvz dl  
Qeudl ri P hglflqh iru klv dvlwvdfh z lvk  
afdlaj sup d vrvv1

Uhihuhqf hv=

^4` Z hlqehj hu/ Vh1 Surylqaj Klj k0  
Ydox/ Frwv Frqv lrxv Fduh= D Fvvlv do  
Vhyhqv Jhghudo Frpshvnlq| iru  
Sk|vflldqv1 Dqqdov ri Lqvnuqdo P hglflqh1  
5344>488=6; 906; ; 1

^5` Oxgp hhu/ NP1 Wp h w Khde-  
Dp hufdq P hglf do Hgxfdvvrq iurp vkh Vkuq  
ri vkh Fhqvuj w vkh Hud ri P daj hg Fduh1  
Qhz \run/ Q\ = R{irug Xqlyhuvlv  
Suhw>53381

^6` Urvhqehj / FH1 Wkh Fduh ri Vvdlaj hu1  
Edvlp ruh/ PG= Wkh Mkvv Krsnlqv  
Xqlyhuvlv Suhw>4; ; 1

^7` Wadqvdlvrq ri vkh Krp hsdvklf  
P hglf do Vrlvly ri vkh Vvdlvri Qhz \run iru  
vkh \ hdu 4; : 5/ Yroxp h [ 1 Dvad| / Q\ =  
Wkh Dv xv Frp sdq| / Sulqvnu> 4; : 5=  
7851

^8` Hgg| / Wldq Dffrxqvri vkh Qhz \run  
Krvslval Qhz \run/ Q\ = Fradqv daq  
Fr 14; 44=75/ 851

^9` Fkduhu ri vkh Vrlvly ri vkh Qhz 0 run  
Krvslval daq vkh Qz v Uhadvlaj Wkhuw/  
z lvk vkh El Qz v daq Uvj xadvrq ri vkh  
Lqvvlvvrq/ daq vkrv ri vkh Eorplaj gdh  
Dv| xp iru vkh Lqvdlh1 Qhz \run/ Q\ =  
Mkv U1P x; rz q/ Sulqvnu>4; 78=661



