



pp{c}mcp#NZqBmkn}pk

h{Q{o}3/4p{c}\{Ncz=i=c#cd{p}{Zn" p{c}\1/4 {n p{f}0i N{p}mN{ z=z-A_# d{=\cbQ{p}{i
@l "dp{a}d @deD=b# _h{Q{o}3/4oNf1/2b{, N}d p}Z;p}\N# p{c}\{z{p}{n" Am{
N}l {n"Q} p{c}\# o{b{, @=_# Am{p{c}\d}, p{c}\{Am{d}, " p{c}\{" oNf1/2 #BZ" p#Z;
m}_h" T{b}{i "b{N}b{N{d}{N{p{c}\{d{o's}n f}Z" @ p{c}\1/4_ T{AN}d C _m{p}l "
T{b}{f}\#

p{f}0p{d} @=Z. p{c}\{f}p{b}n". p{f}p{d}0 @=Z. p{c}\{m#Q{n". p{f}p{b}m{ @=Z. p{c}\{Am{.
p{f}p{b}b{ @=Z. p{c}\{p#b{n" Z. BN{A}\{b3/4z=c#z^u# z{d T{a} D=\D=\}o N}d oNf1/2 #
.... N}d} Ho|Q{p}{f=b?

p{f}e0Zo3/4p{c}\{eZn"=Z. Dd}0l #p{c} N}d p{f}e0ZN}l { @=Z. p{c}\{f}w{a p{f}b{m}B=N}
KN{f}n" o{L}Q} Dd0 N1/4 x{m}N}l {. p{f}NA=Z; @=Z. p{c}\{N{d}{O}n" N{p}\{- u{p}\{; N{b}c-
N1/4 x{m}N}l {.

oq}0zZ0= e{b}o3/4p{c}#AnN{#d{p}{Zd p{f}f}0i N{#d{#m{o}3/4p}\{# d{# T{a} #d{. N}d
d{R=Z" p{b}3/4p{c}#AnN{#Z. k{u}B0", N{a}n"b}m{n p{c}U{O}m}m{d}p{# @d{#m{ KN{AZ. D=b#c
Bb{d}Vp{d}{z{x{o}3/4p{c}#AnN{# p{c}\{N{p}{c}U{d}{d}j}b{m}l {^ z=i=c{p}o"Z3/4

p{f}p{#}U{m}# @d}0 p{f}o"U\ @d}0 p{c}\{u}m{ @d @m{ N{b}, p{f}m{p}{o"U\ p{m}# @=Z. p{c}\{
u}m{ p{m}# @d @m{#}l? b{p}\cb{m}p{c}\{p{m}n" z{T{AN}#b{N}p{c} p{f}p{f}U\ p{m}#o3/4
j}nl #Q{p}{d}#\{.

p{z0b@=Z.p{c\{zb{n", p{m p{z0l +. Bo|Q|p{l U\{@=Z.p{c\{Iw\$ä p{m Bmp²
KNZ; p{d{0m{ 300 @l "d{p{c\{p{c\w\$ä _¼ Üb{N}D} p{p{c\{p{k{=bd{0b{c
p{p{l}ÜZ;N{V=.

p{d{r{d f{öd{p{d{r N{e{d " p{p{c\{Üb{ko| ü o|Q|Dd}0\{¥ @=Z|=.

p{I{m{q{Q|N}b{ d}\{î m{z{î o{¾u}bø " e{z{A{m{p{¾p{c\{N{Z{i{m{f{n" p{d{0p{d{
J{î{x{U= N}m{=Q} A m{¾ ð p{N{A{Z;I N}b{ @=Z|m{.

C {d{T{e{0d{Db}x{m{n{d{0Z{n p}ÜN{m{=o{¾KN{Ä z{a{U{c_{¾Z{c{N{Q} T{e{0l "ÜT{Æ
"z{p{p{c{N{m{=i Q{D{D{m{z{b{e{i " z{m{e{i Q{d{z{0\{p{c\{q{Q{p{d{\{p{m{e{i}d{N{o{¾z{e{i}d{
ü{b{c{x{D{d{N{o{b{ß_{ß=i}d{Q} ". Nd{N{p{c\{+ o{¾N{p{f{n" = p{D{N{p{f{n". Bb{0c{Q}
p{f{f{0î N{ p{ø{bc{c, p{N{Äö {Z, p{D}_{ p{V{Q{p{f, p{b{h{Q{d{0.

p}ÜN{m{=o{¾p{0Üp{²d{z=c{ÜN{z=c{c C z=b{m{0=¾@, B, H@d{Q{x{n}n{d{ÜN{c @=Z|m{.

p{l {U=T{@=Z. Ük{V= @ð H=_p{=b{N{c{h{z"? C Ük{W|ð0 ÜN{¾;@ð N{Ä\{@=Z|m{.

"Ü" _¾p{²b{hl {z=z{Ä_{p{l}Z{n" _h{Q{o{¾N{¼{p{n". Üp{c{D{h{n", Üo{¾N{p{f{n" p{d{N{o{
_ðz{d{0p{d{ Al {m{b{c{o{¾u}=[ç e{z{0ö, ø{m{t{ }n{d{ ÜN{Z{N}n{d{n{0; N{m{N{o{ } \ç D{t{m{N{h{ð
Üg{o|n{d{n{0; p}_{ e{D{o{ }Ün{d{ Üb{¾{s}n{d{n{0 @=Z|m{. p}ÜN{m{=o{¾p{l}Ü{ Üb{¾{s}n=Z.
z{b{ p}N{Ü, @{m{b{¾{s}n".

"ÜQ{¼d}p{²Z;" @d{0 p{l}Z{ð Ü, Q{^, p{l}Ü{ @ð p{c\{p{l}Z{n"Q} ø\Q{¼Z;" p{c\{Q{^}n{d{
({d{, N{¼d{, Z=W{Z}) N{¼T{q}Ü=" @ð @d{ßl {= T{f}»0T{Æ

Üq{f{n= Üd{Ü{\c{Al {c}no{¾KNZ; Üb{c\{c @d{p{p{d{¾b{c\{c, p}Q{c\{c, N{m{Üb{c\{c @d{c\{
p{c\{p{b{m{ i Ü{ _¾N{Z{d{b{c\{c. d{p{h{ d{b{Z;ü{b{c{Ä{Q} e{Z{N{d{p{0k{f{î e=\N{Z{ð

ŭz=ŭf @=Z. pžpřh dn p!Q eĚN{dĵ 1Ěđ Eñz=ŭf @=Z|mř.

ŭz ŭzb}mř{ zQ{^ ŭz ŭpř{, đĚ^ ŭz ŭpř{ @đ mř\{m}o!@ ěd} zQ{^ ŭz ŭpř{ z^ ŭf
ŭN}o|no%đĉ ŭQ{^} _ŭNf (z_β, mW¼ _pĉ Q{^}n") @đ ŭp{ }T}mřŭbd{qfNřnř
m}p{ }d{V, p{c}BT}mřŭh" INKđ=Třnř. p{d}z_ao%đ{N{d}ŭbcKNZ; d%Z; ¼TđĚŭbc
p{m}NZ; Tđ¼TđbCB=NANZ;@l " _!A đđo%đŭNř{q{ }ŭo}ř.

" ŭ " @dŭ @xřf p{ }ZNpř" bZ pčAdZ p{ }ĉ\{đ z^ ç=Tř\}đNč" ŭI ř=" @dŭ _%N{
zmřu}c}mř=Q} p{ }ZNčpřřpřđ=bč- ŭp{ }ĉđřno%KNřđ{ŭpř\đ " ŭI ř=i Nř\ř" @dŭzĚŭ\ř
_đĚ. k}mř{ }đŭ _đQčđd{dđŭI ř, îNAdř Hřđřh" NđŭI ř=. @přN ŭI ř=o%K=Z; ŭ"b{
_đŭ Ddŭ zmřđ đ W|ŭb}přN@đňŭ, _đŭ _đŭd{ }mř_ {đŭ}přN@đňŭ, Nřn" Nđř
zř{ } {đŭ zřf}ŭpřN@đňŭ o} z z đ}přN@đňŭ @=Z|mř. C z z đ}přN@đňŭ p{ }mřç p{ }dNč
@đ}bčđř=\ç ř z Nřñ, C b{ }Qđzř ř ("gd}ŭđđř") f}q}E_ {ŭNčC p{ }cŭđř@pQ}zř d{
@l " =bč bđđřŭwřä " mř đ" @=Z|mř.

zřnk{Q} @mř @l ! Nđ_β = ŭ}x}f}Nř, N¼T² NĚz\ç N}đ @mř N}Nř½ !@bcNřbřf}Nř,
j 1đQ} N¼mřNř\{z\đbčd}mřwřf}Nř. C p{ }ĉ\çZđ Q{ }p{ }ŭQ{ }çE f}NŭI ř =@=Z|mř. Bo|Qř
Cz^ ŭI ř =@đ KNZ" =bč d}mř^ @=Z.A\b}đ l ř=b{ }Aq{ }zĚŭ^ @=Z. N¼{Nř zĚ|ndř
N% mř{ }cđř^ @=Z.\{ " × N¼z= _}zĚŭI ř. " _}zĚŭI ř=" @dŭ p{ }ZNč@zn" @mř
Ac}ŭi ŭNř, AckĚi Nř, AcbđNř @l "đđŭZ;NřA ŭzř { }đŭ ŭzŭmřç p{ }dNč_ %çd{ }ŭçfQ}
p{ }\ř { }\đNčEmřř}zĚŭI ř {z\ř½ ř D=Z|=.

p{ }ŭŭI ř = (@Ě)xřmř břl ř, Třpř{ }P%Nř) o%đ ŭI ř = Q{ }mřç Q{ }f{o%KNř{ }mř
p{ }TĚZřTřř. BNř "L= đpĉ d}mřl {^}l {" @dŭb@Ě)xřmř Třpř{ }P%Nř Q{ }mřç AOmř
Třř _}dř.

N}wř đ, ŭ}x}mřpř=, ŭđř= Ddŭ ŭö=Q{ }břpř_ ř Q{ }břř @đ @=Z|mř N}ñ m}Vpř=ŭcbŭř

DdQ N3Zp=Q}nð oNAeE\ç p{mçf1/2 }l m}, Iø"Zi?

"U{ }="NCB=QZ"o3/4zp{d}mNç "Uzlo+ oP} "U1 z".

B=QZ"o3/4 "U3", "Uj"n" _h"Q{o3/4 "U" W|_n" Nd{N" U3I=Q0+ @dQ p{ZNCzm@l "d{ _h"Q{ "U N3/4=".

Bb{ } ^o3/4p{f}l }l UN{ @=Z.p{ç\}N{n bwç @ð @m. C p{ç\}N{n bw}dQ B=QZ"o3/4 "U3h1/2 2Z+ @=Z|mç. "U\zZ+ @=Z. p{ç\}{bç_}n" DdQbç @d{ @m z"Omççd} B=QZ"o3/4dç _h"Q{o3/4dç Bbçp{ç\}{zwçä DdQ Uqç n=.

"UN3/4p2 Q+ @dQ mç}l {d{d}p{d}ð U ç mç {f}\ç @ð dç {_òQçTç. bç p{U_QD N}pççd{p}mç dç {m}çd{mçQçç}l {mç}l {dç" zDNç Tçpçç\ç

UqçNç zBç, UqçNç TNAmçp2 bçd{p{Zno3/4 "U" Nç p{ç\}{Nç u" z=i=cç oçdç p{dç TçNç=Z"d}Odç. B=_NçUqçNç TNAmçIø"Z| @ð Am}Z ç\Nç\ç @bç" Bdbçm z"Qmç @dQ p{ZNCd} _h"Q{ç_{ bç pçç}=_ç Nç\ç{mçQçç}l {mç}l {dç" o3/4D=bç

Np+UÈççqçbç}Unl {=o3/4VmçQçzmçho3/4zmçð zmçpçççTçpUNç("p}Tmç") p{N}AöçZ ü"b{ NçmçAdç}\Z. @=b{NdçC çmçhð "Uf1/2" @dç}mç.

f}q}E_{Un UED}pç{Ho|Qç pçE=bçNd{N{KN{çdQ eZNA{Tç" _}dç. m}VNç }lno3/4p{dç p{d{bç}ð U N{n pççn"Q} ø\QçEdç z«mç= mç u}p{W|Uð U mçp{dç, çódç, Ançdç@ð p{ç\}{N{n pççn"Q} ø\QçEmç. oçpç+o3/4 "U3i t" @=Z.p{ç\}3/4pç_{ Nd{N{C N{n pççnð p}mç "U3j + @d}Omç. m}W|Nd}ðNçp{TçEmç}i \ø3/4p{ç\}3/4pç_{ U1 "U3j + dç\çpç1/2bç Nd{N{A1 }l N{n pççn" Nççed{Oð "U3j a UZ+ @d}Omç. "NçU3j a Uzd+ @dQ p{Z B=b{ç3/4ç pçAdçBç Dzdçbç "U3j a UZmç @dç}ðNçNç\ç}mç= Bbç- dçbçð ñZp "NçU3j a UZ+ Tççd}OçbçNd{N{

$m^2 \setminus \{eZn b\} m_{\frac{3}{4}d} \{i \ddot{E} \ddot{O} "Z\beta o+ @d\hat{O}Z, p\{^\circ \setminus \{eZn b\} m_{\frac{3}{4}d} \{i \ddot{E} " \hat{U} \ddot{o}+ i \ddot{E} .$
 $p\{e\tilde{O}m\@=Z. p\{^\circ \setminus \{eZn \cdot N\{N\} " \hat{U} \ddot{O} " i \ddot{E} \ddot{O} p\{e\tilde{O}m\{i \ddot{E} @d\frac{1}{4}T\{E$

" $\hat{U} \ddot{o} \ddot{i} l \{ " @d\hat{O} \hat{E} \hat{U} \{ \ddot{O} \hat{O} " \hat{U} \setminus \rho^2 d z d \ddot{o} + @d\hat{O} @\tilde{N} \{o\frac{3}{4}p\} \setminus \{d\} \hat{O} m\{N\frac{1}{4} b\{n\}. C$
 $oN\hat{A} \ddot{O} C " h\frac{1}{2} n + \rho^2 d z d \ddot{o} + \hat{E} z = T \} \ddot{O} \hat{O} " T \{ \{ m \ddot{o} \hat{i} l \{ = " @d\frac{1}{4} T \{ E N \} \ddot{O} " h\frac{1}{2} n + \rho^2 d z d \ddot{o} +$
 $@d\hat{O} p\{ \{ Z N \} _ \{ m \{ \{ \ddot{o} \hat{i} l \{ = " @d\frac{1}{4} p\{ \{ Z p\{ m \{ N \} \{ D = b \}$

$KN\{z=O\hat{U} \ddot{O} 3 T \{ \{ k \} Q \in T Q \{ n p \{ \} o p \{ \} @ \ddot{O} z = q \{ \{ = p \{ A z = O \hat{U} \ddot{O} \} \ddot{O} @ = N \ddot{O} \} \ddot{O} = Z \ddot{O} N \ddot{O} e A$
 $p^2 \} \ddot{O} \hat{O} p\{^\circ \setminus \{ T \{ \{ k \} Q \in \zeta T \{ \setminus \{ \setminus \{ C p^2 \} \} \ddot{O} 3 T \{ \{ k \} Q \in T \{ Q \hat{O} Q \setminus \{ A z = O \hat{U} \ddot{O}$
 $k \} Q \in T Q \{ n = . D b \} z m \{ N \{ 531 o \} \ddot{O} @ = N \ddot{O} p^2 \} \ddot{O} \{ 5 + 3 + 1 = 9 . C 9 \} \ddot{O} 3 T \{ \{ k \} Q \in T Q \{ n =$
 $N \{ \{ N \{ 531 \hat{n} k \} Q \in T Q \{ n = .$

$p \{ \ddot{O} \hat{O} \hat{P} \ddot{O} , N \frac{1}{4} n i \hat{O} z \ddot{U} l \{ = \frac{3}{4} KN \{ Q \in \hat{O} N \} \ddot{O} , N \frac{3}{4} \} \ddot{O} \hat{O} N \} \ddot{O} z p \{ b \beta \hat{O} = \setminus \{ T \{ \{ p \{ T \hat{O} \}$
 $m \{ \{ Q \{ \{ \setminus \{ o \frac{3}{4} b \hat{E} \hat{n} l \ " d \{ Q \{ \{ n \ " H z \hat{O} \setminus \{ N \{ \{ A d \} \hat{O} m \{ N \} \hat{n} KN \{ N \frac{3}{4} \} \ddot{O} \hat{O} " \hat{U} \hat{E} \hat{E} "$
 $(z p \{ \hat{U} \hat{O} = \setminus \{ T \{ \{ \hat{U} \setminus \{ H o \{ Q \frac{3}{4} p \} w \{ N \{ _ \hat{O} l \} \{ o \{ \{ \{ . C z \ddot{O} T \{ \{ \hat{U} \setminus \{ @ z = k p \setminus \{ @ d \hat{O} o z l \{ =$
 $p \{ d \{ N \{ B z \hat{O} Z \{ N \} n = o \frac{3}{4} d \{ @ \tilde{N} \{ @ l \ " = b \}$

$k \{ Q \{ m \{ Q \} \hat{E} = o \frac{3}{4} " p\{^\circ \setminus \{ p \{ _ \{ i l \{ " @d\hat{O} @\tilde{N} \{ m \} p \{ t d e \{ \hat{O} \setminus \{ \hat{O} \} " Z i m \{ l \{ m \{ \hat{U} l \{ \{ t N + @d\frac{1}{4}$
 $z \ll m \{ \hat{E} \hat{U} \{ \{ n \ " p \} \setminus \{ \} m \{ .$

"Z" $p\{ \{ \{ s \} I \ddot{O} Z = Z . B = Q \hat{E} \ddot{O} \frac{3}{4} Z N \} m \{ \{ N \} m \} n N \{ K N \{ \{ K N \{ @ x m \setminus \{ D d \} \hat{O} k \} z D T \} E m \{ o \frac{3}{4} Z N \} m \{$
 $_ \{ N \} m \} n \frac{3}{4} p^2 \hat{b} \{ n l \{ \{ " p\{^\circ \setminus \{ " p\{ \{ Z n \ " T \} n D d \} \hat{O} l \ " . N \} \ddot{O} _ \hat{n} \{ Q \{ o \frac{3}{4} Z N \} m \{ \{ N \} m \} n N \{$
 $\hat{O} \setminus \{ \hat{O} \setminus \{ @ x m \} n \ " D d \} \hat{O} Z N \} m \setminus \frac{3}{4} p\{^\circ \setminus \{ p\{ \{ Z n \ " _ \hat{n} \{ Q \{ o \frac{3}{4} o p \{ \{ .$

$m^2 \setminus \{ m^3 \hat{P} \{ N \{ \setminus \{ \hat{O} \ddot{O} N \{ \setminus \{ \hat{O} N \{ b \{ o N \hat{A} = T \{ n \{ , H = b \{ N \setminus \{ Z . m^3 \hat{A} \{ \ddot{U} \hat{b} \{ H N \hat{A} \setminus \{ \hat{O} n i \hat{K} \} , p\{ \setminus = b \{ d \hat{O}$
 $m^3 \hat{A} \{ , p \{ d \{ N \{ \{ d \hat{O} m^3 \hat{A} \{ N \{ \hat{O} e m^2 \setminus \{ m^3 \hat{P} \{ N \{ \setminus \{ b \{ o N \hat{A} o \frac{3}{4} N \{ p \hat{E} = b \{ N \{ \{ N \{ p\{^\circ \setminus \{ m^3 \hat{P} \{ N \{ \setminus \{ \hat{O} \ddot{O}$
 $o \frac{3}{4} p + o \frac{3}{4} \hat{U} \hat{O} l \{ = " @ = Z \{ m \{ . C m \{ N \setminus \{ N \{ \setminus \{ \hat{O} \frac{3}{4} N \{ \setminus \{ m \{ \hat{A} \hat{O} \hat{E} V n \ " z \ddot{O} N \{ p \{ \{ \ddot{O} d \{ N \{ \ " m \{$

TēlŃN{=Z© N}nxē= T{p}m{Z. p{dbq{=o¼BzŃZ|NBol N{ ģ{ TēlŃN{=Z© N}nxē= T{p}m{Nēd^ad|D=Z|m}. BZ p{Z; "Ūpl {o+ N{ ģ{ TēlŃ ū N}n= p{c} T{ Ū{ d}N{ Bē= o{ N{ N{ Ūē _}ŃC j }_}N}ñ Aē _}d{.