

Wnvk"Ugewtkv{ "Tgxkg y

Rcujqx"Cwfkv" I tqwr

Eqpfwevgf"d{<"2zwphqti kxgp."Ujcmc."cuv5tqu

Pqxo dgt"33vj"/"Pqxo dgt"38vj

Eqpvgpvu

| | |
|--|----|
| 30"Cdqwv"Rcu j q x"Cw f k v" I t q w r | 3 |
| 40"Fku en c k o g t | 3 |
| 50"Kpvtq f w e v k q p | 3 |
| 60"Cdqwv"Wn v k | 3 |
| 70"Tkum"Encuuk f e c v k q p | 4 |
| 7030"K o r c e v | 4 |
| 7040"Nkmg n k j q q f | 4 |
| 7050"Cevkq p"t g s w k t g f" h q t" u g x g t k v{"n g x g n u | 5 |
| 80"Ug ew t k v{"Cu u g u u o g p v"Uw o o c t{ | 5 |
| 90"Gz g ew v k x g"Uw o o c t{ | 6 |
| :0"Hk p f k p i u | 9 |
| :030"Etkvkecn"Hk p f k p i u | 9 |
| JE/23_"Etkvkecn"rtgekukq p"nquu"kp"unk r r c i g"rtq v g e v k q p ecnewncv k q p | 9 |
| JE/24_"V j g"Nq y g u v"eqpvtkd w v q t"q h"v j g"v q r"eqpvtkd w v q t)u"n k u v ecp"d g"t g o q x g f"w p h c k t n{ | 11 |
| :040"J k i j"Hk p f k p i u | 13 |
| JJ/23_"Y t q p i"ce v k x g"r w o r g t"d q p w u"ecnewncv k q p | 13 |
| JJ/24_"F q U"q p"v j g"r w o r" h w p e v k q p" f w g"v q" g z e g u u k x g n{"n q y unk r r c i g"v q n g t c p e g | 14 |
| JJ/25_"F q U"q p" f g r q u k v u" f w t k p i"v j g" g c t n{"d k t f" r g t k q f | 15 |
| :050"O g f k w o"Hk p f k p i u | 18 |
| JO/23_"*Q w v"q h"ueq r g+"O k u u k p i" w p e j g e m g f" d n q e m" k p V k e m O c v j"n k d t c t{ | 18 |
| JO/24_"R q v g p v k c n"q x g t(E q y"t k u m" f w g"v q"p q v" w u k p i" o w n F k x k p" a i g v U r q v R t k e g*+ | 18 |
| JO/25_"T g h g t t c n" d q p w u" e c r" y k n n" d g" n q y g t" v j c p" y j c v" y c u k p v g p f g f | 20 |
| JO/26_"Y t q p i"t q w p f k p i"q h"V Y C R" y j g p v k e m E w o w n c v k x g F g n v c" k u" p g i c v k x g | 20 |
| JO/27_"T g h g t t g t)u"eqpvtkd w v k q p u" c t g"p q v" w r f c v g f" e q t t g e v n{ h q t"p q p/p c v k x g" f g r q u k v u | |

| | |
|--|----|
|]O/28_"Ytqpi"cuuw o rvkqp"vjcv"vjg"kprrwv"vqmgp"y knn"dg YGVJ | 23 |
|]O/29_"FqU"qp"vjg"fgrqukv"hwpevkqp"fwg"vq"gzeguukxgn{ nqy"unkrrci g"vqngtcpeg | 24 |
|]O/2:_"VYCR"ecp"dg"o cprwncvgf | 26 |
| :060"Nqy"Hkpfkpiu | 27 |
|]N/23_"Tqwpfkpi"gttqt"kp"gctn{"dktf"fgrqukv | 27 |
|]N/24_"Eqpvtcev"kpeq o rcvkdknkv{"ykvj"ppp/uvcpfctf GTE42"vqmgpu"nkmg"WUFV | 27 |
|]N/25_"Wukpi"urqv"rtkeg"kpukfg"aecnewncvgVYCR*+"o cmgu eqfg"xwnpgtcdng"vq"rtkeg"o cprwncvkqpu | 28 |
|]N/26_"Cvvcemgt"ecp"etgcvg"ektewnct"tghgttcnu"ykvj"ngpi vju qh"vj tgg"cpf"jki jgt | 28 |
|]N/27_"Wugt"urgek l g f"unkrrci g"ejgem"hqt"rwo r l u y c r"ku kpg h l ekgpv | 28 |
|]N/28_"Kpeqttgev"ecnewncvkqp"kp"i gv I nqdcnFcvc | 29 |
|]N/29_"Pq"uwrrqtv"hqt"hgg/qp/vtcpuhgt"kprrwv"vqmgp | 29 |
|]N/2:_"i gvWugtFcvc"tgvwtpu"vjg"y tqp i "uvtgcm"kprrwv"wr rgt dqwpfct{"hqt"e{eng"3 | 30 |
|]N/2;_"FqU"xgevqt"kp"vjg"ncwpej"hwpevkqp | 31 |
|]N/32_"Pcvkxg"vqmgpu"tgegkxgf"d{"vjg"tgegkxg"cpf"hcndcem ecp"dg"nqemgf | 32 |
|]N/33_"Rqvgpvkcn"qxgtEqy"kp"ai gvUrqvRtkeg*+"fwtkpi"rtkeg ecnewncvkqp | 32 |
|]N/34_"Nukpi"uq o g"rctv"qh"vjg"uvtgcm"dqpwu"kh"fgrqukvkpi kp"o wnvkrng"vtcpucevkqpu | |

30"Cdqwv"Rcu j qx"Cw fkv" I tqwr

Rcu j qx"Cw fkv" I tqwr"eqpukuvu"qh" o wnvkrng"vgc o u"qh"uq o g"qh"vj g"dguv"u o ctv"eqpvtcev
ugewtkv{"tgugcte j gtu"kp"vj g"urceg0" J cxkpi" c"eq o dkpgf"tgrqtvgf"ugewtkv{
xwnpgtcdknkvkgu"eqwpv"qh"qxgt"3222."vj g" i tqwr"uvtkxgu"vq"etgcvg"vj g"cdunwvg"xgt{"dguv
cw fkv"lqwtpg{"rquukdng"/"cnvj qwi j"322 ' "ugewtkv{"ecp"pgxgt"dg"i wctcpvggf."y g"f q
i wctcpvgg"vj g"dguv"ghhqtvu"qh"qwt"gz r g t k g p e g f"tgugcte j gtu"hqt{"qwt"dnqeme j ckp
rtqvqeqn0"Ej gem"qwt"rtgxkqwu"y qtm"jgtg"qt"tgcej"qww"qp"Vy kvvgt" Brcujqxmtwo.0

40"Fkuenck o gt

C"u o ctv"eqpvtcev"ugewtkv{"tgxkgy"ecp"pgxgt"xgtkh{"vj g"eq o rngvg"cdugpeg"qh
xwnpgtcdknkvkgu0"Vj ku"ku" c"vk o g."tguqwtg"cpf"gz r g t k u g"dqwpf"ghhqtv"y jgtg"y g"vt{"vq
l p f"cu" o cp{"xwnpgtcdknkvkgu"cu"rquukdng0"Yg"ecp"pqv"i wctcpvgg"322 ' "ugewtkv{"chvgt
vj g"tgxkgy"qt"gxgp"kh"vj g"tgxkgy"y kmn"l p f"cp{"rtqdng o u"y kvj"}qwt"u o ctv"eqpvtcevu0
Uwdugswgpv"ugewtkv{"tgxkgyu."dw i"dqwpv{"rtqi tc o u"cpf"qp/ej ckp"o qpkvqtkpi"ctg
uvtqpin{"tgeq o o gpfgf0

50"Kpvtq fwevkqp

C"vk o g/dqzgf"ugewtkv{"tgxkgy"qh"vj g"wnvk/qt i lwnvk/rtqvqeqn/eqpvtcev"tgrqukvqt{"y cu
fqp g"d{"**Rcu j qx"Cw fkv" I tqwr.**"y kvj" c"hqewu"qp"vj g"ugewtkv{"curgevu"qh"vj g
cr nkecvkqp)u"u o ctv"eqpvtcevu"ko rng o gpvcvkqp0

60"Cdqwv"Wnvk

WNVK"ku" c" FgHk"rtqvqeqn"y jgtg"wugtu"ecp"fgrqukv"vj g"pcvkxg"ewttgpe{"qh" c
dnqeme j ckp."uwe j"cu"GV J"qp"vj g"Gvjgtgw o"Ockppgv."kp"gz e j c p i g" h q t" W N V K" v q m g p u 0
Wnvk"ncwpe j gu"kvu"vqmgp"d{"etgcvkpi" c"nkswkfkv{"rqqn"qp"Wpkuy cr"y jkng"j c p f n k p i
kpkvkc n"vqmgp"fkuvtkdwwkqp0"Wugtu"ecp"fgrqukv"kp r w v"vqmgpu"vq" g c t p" W N V K" v q m g p u ." y k v j
u{uv g o u"kp" r n c e g" v q" e n c k o" t g y c t f u" c p f" o c p c i g" t g h g t t c n u 0

70"Tkum"Encuukłecvkqp

| Ugxgtkv{ | K o rcev<"Jki j | K o rcev<"Ogfkwo | K o rcev<"Nqy |
|--------------------|-----------------|------------------|---------------|
| Nkmgнкjqqf<"Jki j | Etkvkecn | Jki j | Ogfkwo |
| Nkmgнкjqqf<"Ogfkwo | Jki j | Ogfkwo | Nqy |
| Nkmgнкjqqf<"Nqy | Ogfkwo | Nqy | Nqy |

7030"K o rcev

- Jki j"/"ngcfu"vq"с"ukіpkłecpv" o cvgtkcн"nquu"qh"cuugvu"kp"vjg"rtqvqeqn"qt"ukіpkłecpvн{ jctou"с"itqwr"qh"wugtu0
- Ogfkwo"/"qpн{ "с"u o cнn"с o qwpv"qh"hwpfu"ecp"dg"nquv"*uwej"cu"ngcmc i g"qh"xcnwg+"qt"с eqtg"hwpvkqpснкv{ "qh"vjg"rtqvqeqn"ku"chhgevgf0
- Nqy"/"ecp"ngcf"vq"сp{ "mkpf"qh"wpgzrgevgf"dgjcxkqt"ykvj"uqog"qh"vjg"rtqvqeqn)u hwpvkqpснкvgu"vjcv)u"pqv"uq"etkvkecn0

7040"Nkmgнкjqqf

- Jki j"/"cvvcem"rcvj"ku"rquukdng"ykvj"tgcuqpсdng"cuuw o rvkqpu"vjcv"okoke"qp/ejckp eqpfkvkqpu."сpf"vjg"equv"qh"vjg"cvvcem"ku"tgncvкxgn{ "nqy"eqo rctgf"vq"vjg"с o qwpv"qh hwpfu"vjcv"ecp"dg"uvqngp"qt"nquv0
- Ogfkwo"/"qpн{ "с"eqpfkvkqpсcнн{ "kpegpvkхk | gf"cvvcem"xgevqt."dwv"uvkнн"tgncvкxgn{ нkmgн{0
- Nqy"/"jcu"vqq" o сp{ "qt"vqq"wpнkmgн{ "cuuw o rvkqpu"qt"tgswktgu"с"ukіpkłecpv"uvcmg"d{ vjg"cvvcemgt"ykvj"nkvvng"qt"pq"kpegpvkхg0

7050"Cevkqp"tgs wktgf"hqt"ugxgtkv{"ngxgnu

- Etkvkecn"/"Owuv"ǀz"cu"uqqp"cu"rquukdng"*kh"cntgcf{"fgrnq{gf+
- Jkij"/"Owuv"ǀz"*dghqtg"fgrnq{ o gpv"kh"pqv"cntgcf{"fgrnq{gf+
- Ogfkwo"/"Ujqwnf"ǀz
- Nqy"/"Eqwnf"ǀz

80"Ugewtkv{"Cuuguu o gpv"Uw o o ct{

tgxkgy"eqo okv"jcu j"/"4246fdcfe34h8e6ghgc3f7ge4:g8f::6e8de8858

ǀzgu"tgxkgy"eqo okv"jcu j"/"h825454efd7h28dgc3:eeh4e8:h669:f9366::93

Ueqrg

Vjg"hqmqy kpi"u o ctv"eqpvtcevu"ygtg"kp"ueqrg"qh"vjg"cwfkv<

- ŭQŭø

90"Gzgewvkxg"Uw o o ct{

Qxgt"vjg"eqwtug"qh"vjg"ugewtkv{"tgxkgy."2zwphqti kxgp."Ujcmc."cuv5tqu"gpici gf"ykvj
Wnvk"vq"tgxkgy "Wnvk0"Kp"vjku"rgtkqf"qh"vk o g"c"vqvcn"qh"47"kuuwgu"ygtg"wpeqxgtgf0

Rtqvqeqn"Uw o o ct{

| | |
|-----------------|---|
| Rtqvqeqn"Pc o g | Wnvk |
| Tgrqukvqt{ | jvvruc11i kvjwd0eq o lwnvk/ qti lwnvk/rtqvqeqn/eqpvtcev |
| Fcvg | Pqxg o dgt"33vj"/"Pqxg o dgt"38vj |
| Rtqvqeqn"V{rg | Hct o kpi "rtqvqeqn |

Hkpfkpiu"Eqwpv

| | |
|----------------|----------|
| Ugxgtkv{ | C o qwpv |
| Etkvkecn | 4 |
| Jki j | 5 |
| Ogfkwo | : |
| Nqy | 34 |
| Vqvcn"Hkpfkpiu | 47 |

Uw o o c t { " q h " H k p f k p i u

| KF | Vkvnq | Ugxgtnv{ | Uvcvwu |
|-----------------|--|----------|----------|
|] <u>E/23</u> — | Etkvkecn"rtgekukqp"nquu"kp"unkrrci g rtqvgevkqp"ecnewncvkqp | Etkvkecn | Tguqnxgf |
|] <u>E/24</u> — | Vjg"Nqyguv"eqpvtkdwvqt"qh"vjg"vqr eqpvtkdwvqt)u"nkuv"ecp"dg"tg o qxgf wphcktn{ | Etkvkecn | Tguqnxgf |
|] <u>J/23</u> — | Ytqpi"cevkxg"rw o rgt"dqpwu ecnewncvkqp | Jkij | Tguqnxgf |
|] <u>J/24</u> — | FqU"qp"vjg"rw o r"hwpevkqp"fwg"vq gzeguukxgn{"nqy"unkrrci g"vqngtcpeg | Jkij | Tguqnxgf |
|] <u>J/25</u> — | FqU"qp"fgrqukvu"fwtkpi"vjg"gctn{"dktf rgtkqf | Jkij | Tguqnxgf |
|] <u>O/23</u> — | *Qwv"qh"ueqrg+"Okuukpi"wpejgemgf dnqem"kp"VkemOcvj"nkdtct{ | Ogfkwo | Tguqnxgf |
|] <u>O/24</u> — | Rqvgpvkc"qxgtEqy"tkum"fwg"vq"pqv wukpi"ownFkx"kp"aigvUrqvRtkeg*+ | Ogfkwo | Tguqnxgf |
|] <u>O/25</u> — | Tghgttcn"dqpwu"ecr"yknn"dg"nqygt"vjcp y jcv"ycu"kpvgpfgf | Ogfkwo | Tguqnxgf |
|] <u>O/26</u> — | Ytqpi"tqwpfkpi"qh"VYCR"y jgp vkemEw o wncvkxgFgnvc"ku"pgicvkxg | Ogfkwo | Tguqnxgf |
|] <u>O/27</u> — | Tghgttgt)u"eqpvtkdwvkqpu"ctg"pqv wrfcvgf"eqttgevn{"hqt"pqp/pcvkxg fgrqukvu | Ogfkwo | Tguqnxgf |
|] <u>O/28</u> — | Ytqpi"cuuw o rvkqp"vjcv"vjg"kprwv vqmgp"yknn"dg"YGVJ | Ogfkwo | Tguqnxgf |
|] <u>O/29</u> — | FqU"qp"vjg"fgrqukv"hwpevkqp"fwg"vq gzeguukxgn{"nqy"unkrrci g"vqngtcpeg | Ogfkwo | Tguqnxgf |

| | | | |
|---------------|--|--------|--------------|
| <u>JO/2:-</u> | V YCR"ecp"dg" o cprwncvgf | Ogfkwo | Tguqnxgf |
| <u>JN/23-</u> | Tqwpfkpi "gttqt"kp"gctn{"dktf"fgrqkv | Nqy | Tguqnxgf |
| <u>JN/24-</u> | Eqpvtcev"kpeq o rcvdknkv{"ykvj"pqp/ uvcpfctf"GTE42"vqmgpu"nkmg"WUFV | Nqy | Tguqnxgf |
| <u>JN/25-</u> | Wukpi "urqv"rtkeg"kpukfg aecnewncvgV YCR*+" o cmgu"eqfg xwnpgtcdng"vq"rtkeg" o cprwncvkqpu | Nqy | Tguqnxgf |
| <u>JN/26-</u> | Cwvcemgt"ecp"etgcvg"ektewnct"tghgttcnu ykvj"ngpi vju"qh"vj tgg"cpf"jki jgt | Nqy | Cempqyngfigf |
| <u>JN/27-</u> | Wugt"urgekfgf"unkrrci g"ejgem"hqt rwo rlu ycr"ku"kpghfekgpv | Nqy | Tguqnxgf |
| <u>JN/28-</u> | kpeqttgev"ecnewncvkqp"kp igv InqdcnFcvc | Nqy | Tguqnxgf |
| <u>JN/29-</u> | Pq"uwrrqtv"hqt"hgg/qp/vtcpuhgt"kprwv vqmgp | Nqy | Cempqyngfigf |
| <u>JN/2:-</u> | igvWugtFcvc"tgwtpu"vjg"y tqp i "uvtgcm kprwv"wr rgt"dqwpfct{"hqt"e{eng"3 | Nqy | Tguqnxgf |
| <u>JN/2:-</u> | FqU"xgevqt"kp"vjg"ncwpej"hwpevkqp | Nqy | Cempqyngfigf |
| <u>JN/32-</u> | Pcvkxg"vqmgpu"tgegkxgf"d{"vjg"tgegkxg cpf"hcndcem"ecp"dg"nqemgf | Nqy | Tguqnxgf |
| <u>JN/33-</u> | Rqvgpvken"qxgtEqy "kp"a igvUrqvRtkeg*+ fwtkpi "rtkeg"ecnewncvkqp | Nqy | Tguqnxgf |
| <u>JN/34-</u> | Nqukpi "uq o g"rctv"qh"vjg"uvtgcm"dqpwu kh"fgrqkvkpi "kp" o wnvkrng"vtcpucevqpu | Nqy | Cempqyngfigf |

:0"Hkp f k p i u

:030"E t k v k e c n " H k p f k p i u

J E / 2 3 _ " E t k v k e c n " r t g e k u k q p " n q u u " k p " u n k r r c i g
r t q v g e v k q p " e c n e w n c v k q p

U g x g t k v {

K o r c e v < " J k i j

N k m g n k j q q f < " J k i j

F g u e t k r v k q p

V j g " W N V K " e q p v t c e v " e q p v c k p u " c " r t g e k u k q p " g t t q t " k p " k v u " u n k r r c i g " r t q v g e v k q p
o g e j c p k u o " f w t k p i " v q m g p " u y c r u " * w u k p i " 3 : " k p u v g c f " q h " 3 g 3 : + 0 " K p " v j g

žb}á*ø^*|\ŧ~←æ^ô~ãŨ→\↔"hwpevkqp."vjg"ecnewncvkqp"qh

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tguwnvu"kp"c"uk i p k l e c p v " r t g e k u k q p " n q u u 0

Tgeq o o gp f cvkqpu

ÉÁ

ĚĂĂĂĂĂĂĂĂĂĂĂĂĂŽ\~*O~^{\tilde{a}\leftrightarrow\hat{a}}|\backslash\sim\tilde{a}bÈ\tilde{a}\ae\uparrow\sim\{\ae\Uparrow\leftrightarrow^{\wedge}O~^{\wedge}\backslash\tilde{a}\leftrightarrow\hat{a}}|\backslash\sim\tilde{a}D\grave{\text{I}}

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EÁÄÅĀĂĀĀĀĀĀĀĀĀĀĀĀĐǺǾ↑~{æǺ↑↔^0~^\\ã↔â|\\~ãǺ↔àǺ´~^\\ǻ↔ă|\\~āNääãæbbǺ↔bǺăäăæä

[illegible][illegible]

**]J/23_ "Y tqp i "cevkxg"rw o rgt"dqpwu
ecnewncvkqp**

Hkz"vjg"dqpwu"ecnewncvkqp<

↔āĀÇŽ↔bn´\↔{æſ | ↑*æāÇ´ | ↔→æĒĀ´~^↔ā↔ā | \~āDĀBBĀā~^ | bĀLĀēDĀ |
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ĒĀÇFēēēēĒĀĒĀNŌŪŌŪŌŽŠŪRŠŌŰŽŇŠSŪUŽŠŌŰŌŌSŪNŌŌDĀDĀFēēēēĪ
ĒĀĀĀĀĀĀĀĀĀĀĀĀĀā~^ | bĀKĀā~^ | bĀĒĀÇFēēēēĒĀĒĀNŌŪŌŪŌŽŠŪRŠŌŰŽŇŠSŪUŽŠŌŰŌŌSŪNŌŌDĀDĀFēēēēĪ
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] J /24_ "F qU" qp" v j g" **rwor** "hwpevkqp" f wg" vq
gzeguukxgn{ "nq y "unkr r c i g" vqngt cpeg

Ugxgtkv{

Ko rcev<" Jki j

Nkmgkj qq f<" O g fkw o

Fguetkrvkqp

Kp"v j g" r w o r" r t q e g u u. "c" h t c e v k q p" q h" v j g" k p r w v" v q m g p u" j g n f" d { "v j g" W N V K" e q p v t c e v
c t g" u y c r r g f" h q t" W N V K" v q m g p u 0" V j g" u { u v g o " e c n e w n c v g u" v j g" g z r g e v g f" c o q w p v" q h
W N V K" v q m g p u" d c u g f" q p" v j g" V Y C R" c p f" c r r n k g u" c" u n k r r c i g" r t q v g e v k q p" v j c v" e c w u g u
v j g" u y c r" v q" h c k n" k h" c" u n k r r c i g" i t g c v g t" v j c p" **RNVŽUŪNŠŽUQŌŠŠNŌŌŽŇŠŪ** "ku" f g v g e v g f 0

FĪĪĪĀĀĀĀĀ111" Bpqvkeg" Oczkowo" cnnqygf" unkr rcig" hqt" uycru" kp" dcuku" rqkpvu" *20 ; ; ' +
FĪĪĪĀĀĀĀĀ | ↔^ \ G I Ū Ā r w d n k e " ~ ^ b \ ā ^ \ Ā R N V Ž U Ū N Š Ž U Q Ō Š Š N Ō Ō Ž Ň Š Ū Ā K Ā Ġ Ā Ē Ā Ū Q Ū Ō Ž Š Ū R Ň Ō Ű Ī
ĀĀĀĀÇÈÈÈD
FFĪĠĪĀĀĀĀĀĀĀĀ11" 50" Ejqqug" v j g" j k i j g t" o k p k o w o" c o q w p v" d g v y g g p" w u g t / u r g e k h k g f" c p f"
11" k p v g t p c n" u n k r r c i g" r t q v g e v k q p
FFĪĪĪĀĀĀĀĀĀĀĀ | ↔^ \ G I Ū Ā ↑ ↔^ Ū → \ ↔ N ↑ ~ | ^ \ Ø ^ \ æ ā ^ ā → Ā K Ā
ĀĀÇæ [* æ ´ \ æ ā Ū → \ ↔ N ↑ ~ | ^ \ Ū ↔ \ ā ~ | \ U → * * á & æ Ā Ē Ā Ç F ē ē ē ē Ē Ā R N V Ž U Ū N Š Ž U Q Ō Š Š N Ō Ō Ž Ň Š Ū D D Ā D Ā F ē ē ē ē Ī
FFĪĪĪĀ
ĀĀĀĀĀĀĀĀĀĀĀ | ↔^ \ G I Ū Ā æ ā ð æ ´ \ ↔ { æ R ↔^ Ū → \ ↔ N ↑ ~ | ^ \ Ā K Ā ↑ ↔^ Ū → \ ↔ N ↑ ~ | ^ \ Ā L Ā ↑ ↔^ Ū → \ ↔ N ↑ ~ | ^ \ Ø ^ \ æ ā ^ ā → Ā L Ā ↑ ↔
FFĪŪĪ

V j g" e w t t g p v" x c n w g" h q t" **RNVŽUŪNŠŽUQŌŠŠNŌŌŽŇŠŪ** "ku" ; ; "dcuku" r q k p v u" *20 ; ; ' +0
V c m k p i " k p v q" c e e q w p v" v j c v" v j g" r q q n" h g g" k u" 3 ' . " g x g p" k p" v j g" d g u v" e c u g" u e g p c t k q
* V Y C R" g s w c n" v q" u r q v" r t k e g" c p f" u o c n n" c o q w p v" q h" k p r w v" v q m g p u" u g p v + . " v j g" u y c r
y k n n" h c k n 0

Cu" c" t g u w n v. " v j g" r w o r" r t q e g u u" e c p" p q v" d g" g z g e w v g f 0" I k x g p" v j c v" v j k u" k u" c
h w p f c o g p v c n" r c t v" q h" v j g" o g e j c p k e u" q h" v j g" W N V K" r t q v q e q n. " v j k u" k u u w g" k u
e q p u k f g t g f" j k i j" u g x g t k v { 0

P q v g < " V j g t g" k u" c p q v j g t" k u u w g" t g n c v g f" v q" v j g" **Žb} ā * Ø ^ * | \ Ū ~ ← æ ^ Ō ~ ā Ū → \ ↔** " h w p e v k q p
v j c v" e c w u g u" v j g" g z r g e v g f" c o q w p v" q h" W N V K" v q m g p u" v q" d g" e c n e w n c v g f" k p e q t t g e v n {

* | ↑ *

C"rqtvkqp"qh"vjg"kp r wv"vqmgpu"fg r qukvgf"d{"vjg"wugt."vq i g v j g t"ykvj"cp"gs w k x c n g p v
c o q w p v"qh"WNVK"vqmgpu."ctg"cf f g f"vq"vjg"rqqn"cu"nks w k f k v{0"Vjg"co q w p v"qh"WNVK
vqmgpu"ku"ecnewncvgf"wukp i"vjg"ogpvkqpgf"fg r qukv"rtkeg0

İİGiĀĀĀĀĀĀĀĀĀ↔^*|Ų~←æ^ō~ǎQŞĀKĀ
ĀĀÇ↔^*|Ų~←æ^N↑~|^\ĀĒAQŞŽOŠSŲPØŅŮÚØŠŠŽŞÓPÓOSŪNŌÓDĀDĀF€€İ
İİGiĀĀĀĀĀĀĀĀĀ|→\ēō~ǎQŞĀKĀ↔^*|Ų~←æ^ō~ǎQŞĀĒFæFİĀDĀäæ^~bē\şăē^æİ

Y j gp"v j g"v y q"v q m g p u" c t g" c f f g f" c u" n k s w k f k v { . " v j g" e q p v t c e v" g p u w t g u" v j c v" v j g
c o q w p v u" r t q x k f g f" c t g" p q v" t g f w e g f" v q" o q t g" v j c p" **RNVŽNĚŽQŠŽUQØŠŠNÖÖŽŇŠU**
d c u k u" r q k p v u" y k v j" t g u r g e v" v q" v j g" f g u k t g f" c o q w p v u" V j k u" o g c p u" v j c v" c" f k h h g t g p e g
d g v y g g p" v j g" f g r q u k v" r t k e g" c p f" v j g" u r q v" r t k e g" i t g c v g t" v j c p
RNVŽNĚŽQŠŽUQØŠŠNÖÖŽŇŠU " d c u k u" r q k p v u" y k n n" t g x g t v" v j g" v t c p u c e v k q p" I k x g p" v j c v
v j g" f g r q u k v" r t k e g" k u" ĺ z g f" k p" v j g" ĺ t u v" 46" j q w t u. " c p { " e j c p i g" k p" v j g" u r q v" r t k e g
i t g c v g t" v j c p" **RNVŽNĚŽQŠŽUQØŠŠNÖÖŽŇŠU** " y k n n" e c w u g" c n n" f g r q u k v u" v q" t g x g t v" w p v k n
v j g" g c t n { " d k t f" r g t k q f" g p f u 0

```
íëĜiĀĀĀĀĀĀĀĀ |↔^\\GIŲĀ↑↔^Ų→\\↔N↑~ | ^\\ĀKĀÇ |→\\↔ô~ăQŞĀĒĀ  
ĀĀÇFëëëëĀĒĀRNVŽNĖĖŽQŞŽUQØŞŞNŌÖŽŅŠUDDĀĎĀFëëëëĬ  
íëĤiĀĀĀĀĀĀĀĀ |↔^\\GIŲĀ↑↔^Ø^* | Ų~←æ^N↑~ | ^\\ĀKĀÇ↔^* | Ų~←æ^ô~ăQŞĀĒĀ  
ĀĀÇFëëëëĀĒĀRNVŽNĖĖŽQŞŽUQØŞŞNŌÖŽŅŠUDDĀĎĀFëëëëĬ
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Vjku"kuuwg"jcu"uqog"ko rqtvcpv"ko rncevkgpu<

- I kxgp"vjg"tgngxcpeg"qh"vjg"kpvkcn"cfqrvkqp"vq"vjg"rtqlgev."nqemkpi"vjg"ockp
 hwpevkqpcnk{\ "qh"vjg"eqpvtcev"htq"vjg"t"tuv"46"jqwtu"okijv"ukipk\ecpv{\
 fkokpkuj"vjg"gpici"igopv"qh"vjg"wugtu)
 C"ocknekqwu"cevqt"eqwnf"ockmg"cfgrqukv"cpf"chvgt"yctf"uycr"vjg"rqqn"vq"dnqem
 cp{\ "qvjgt"wugtu"htq"ockfgrqukvkpi."dgkpi"vjg"qp{\ "qpg"cdng"vq"dpgt"v"htq"ockvjg
 gctn{\ "dktf"fgrqukv"rtkeg"cpf"ugnkp"vjqug"vqmgpu"cv"ck"jki"jgt"rtkeg"qpeg"vjg
 gctn{\ "dktf"rgtkqf"gpfu)

qqh"qh"Egpegrv

à | ^ ´ \↔~^Ā\æb\ŽŒ~UŒæ*~b↔\bNà\æāQá | ^ ´ áÇDĀ* | ā↔~´Ā |
ĀĀĀĀ11"Uycr"vq"oqxg"urqv"rtkeg
ĀĀĀĀ |↔^ \GINĀ}æ\â0^ĀKĀ€È€WĀæ\âæāĬ

ĀĀĀĀĀĀĀĀ\~←æ^0^ĬĀāāāāæbbÇ}æ\âDĒ
ĀĀĀĀĀĀĀĀ\~←æ^Š | \ĬĀāāāāæbbÇ |→\↔DĒ
ĀĀĀĀĀĀĀĀâææĬĀF€Ž€€€Ē
ĀĀĀĀĀĀĀĀâæ´↔*↔æ^ \ĬĀāāāāæbbÇ\ā↔bDĒ
ĀĀĀĀĀĀĀĀâæāā↔~^æĬĀdnqem0vkoguvcorĒ
ĀĀĀĀĀĀĀĀā↑~ | ^ \0^ĬĀ}æ\â0^Ē
ĀĀĀĀĀĀĀĀā↑~ | ^ \Š | \R↔^↔↑ | ↑ĬĀ€Ē
ĀĀĀĀĀĀĀĀb@ă\Şă↔´æQ↔↑↔\VİWĬĀ€
ĀĀĀĀcDĬ
ĀĀĀĀ{ĜP~ | \æăÈæ[á´\0^* | \U↔^&→æÇb}á*Şăăă↑bDĬ

ĀĀĀĀ11"Fgrqkv"qp"WNVK"tgxgtvu"fwg"vq"rtkeg"unkrrcig
ĀĀĀĀ{↑Èæ[*æ´\Pæ{æă\ÇĂŞă↔´æĀb↔~* *á&æĀ´âæ´←ĂDĬ
ĀĀĀĀ |→\↔Èăæ*~b↔\Sá\↔{æ | {á→|æĬĀ€È€€€€FĀæ\âæăcÇăăăăæbb
ĀĀĀĀĀĀÇ€DĒĀ€ĒĀdnqem0vkoguvcorĒĀăă→bæDĬ
c

Tgeq o o gp f cvkqpu

Fwtkpi"vjg"gctn{"dktf"rgtkqf."wug"vjg"urqv"rtkeg"vq"ecnewncvg"vjg"c o qwpv"qh
WNVK"vqmgpu"vq"dg"cf fgf"vq"vjg"rqqn"cu"nkswkfkv{0

:050" Ogfkwo "Hkpfkpiu

]O/23_ "*Qwv"qh"ueqrg+" Okuukpi "wpejgemgf
dnqem"kp"VkemOcvj "nkdtct{

Ugxgtkv{

Ko rcev<" Jki j

Nkmgkjqqf<"Nqy

Fguetkrvkqp

Wpkuycr" ocvj "nkdtctkgu" tgn{ "qp" y tcr rkp i "dgjcxkqt" hqt" eqpfwevkpi "ctkvj o gvke
qrgtcvkqpu0"Uqnkfkv{ "xgtukqp"20:02"kpvtqfwegf" ejgemgf"ctkvj o gvke" d{ "fghcwnv
y jgtg"qrgtcvkqpu"vjcv"ecwug"cp"qxgtEqy" yqwnf"tgxgtv0

Ukpeg"vjg" →⇒âÐ| ^↔þ} á*ĐŮ↔´ ←Rá\âÈb~→ "nkdtct{ "ycu"cfcrvgf"htqo "Wpkuycr"cpf
ytkvvgp"kp"Uqnkfkv{ "xgtukqp"20:046."vjgug"ctkvj o gvke"qrgtcvkqpu"ujqwnf"dg
y tcr rgf"kp"cp"wpejgemgf"dnqem0

Tgeqo o gpfcvkqpu

Kp" &æ\U@ã\pá\↔~N\Ů↔´ ← "cpf" &æ\Ů↔´ ←N\U@ã\pá\↔~ ."y tcr"vjg"ctkvj o gvke
qrgtcvkqpu"kp"wpejgemgf"dnqemu"vq" o ckpvckp"eqo rcvkdknkv{ "ykvj "Wpkuycr" ocvj
nkdtctkgu0

]O/24_ "Rqvgpvkcn"qxgtEqy "tkum"fwg"vq"pqv
wukpi " ownFkx "kp" aigvUrqvRtkeg*+

Ugxgtkv{

Ko rcev<" Jki j

Nkmgkjqqf<"Nqy

Fguetkrvkqp

Y jgp"WNVK"ku" \~←æ^€ "cpf"vjg"rtkeg"kpetgcugu"uk i pk ħecpvn{<

- *ã↔´æVFİĠ "eqwnf"gzeggf" GZGIWÁĐÁFæFÎ
- Vjg"o wnvkrnkecvkqp" *ã↔´æVFİĠGÁEÁFæFÎ "y qwnf"qxgtEqy"dghqtg"vjg"tki j v"uj khv
- Vjku"ecwugu"vjg"vtcpucevkqp"vq"tgxgtv0

Vjg"qxgtEqy"y qwnf"ecwug"vjg"vtcpucevkqp"vq"tgxgtv"kh"WNVK"ku"vqmgp"2.
rtgxgpkpi<

- Fgrqkvu"vjcv"ejgem"urqv"rtkeg
- Rwo ru"vjcv"tgn{"qp"rtkeg"ecnewncvkqpu
- Cp{"qvjgt"hwpevkqpu"wukpi" Ž&æ\U*~\Şã↔´æÇD

Vjg"gttqt"ku"pqv"wukpi"uchg"ctkvj o gvke"qrgtcvkqpu"nkmg"Wpkuy cr)u

Ô|→Rá\âÊ↑|→↔{ÇD}."Ô|→Rá\âÊ↑|→↔{ÇD}"cmnqy"kpvgto gfkcvg"qxgtEqy"y jkng
rtgugtxkpi"rtgekukqp0

```
à| ^ ^ \↔~^ÁŽ&æ\U*~\Şã↔´æÇDÁ↔^æã^á→Á{↔æ}Áãæ\|ã^bÁÇ|↔^GIWÁb*~\Şã↔´æDÁ|
ÁÁÁÁÁÁÁÁÊÊÊÊ

ÁÁÁÁÁÁÁÁ↔àÁÇ↔bŮ→\↔Ů~←æ^€DÁ|
ÁÁÁÁÁÁÁÁÁÁÁÁ11"50"Ecnewncvg"rtkeg"cu"kprwv"vqmgp"coqwpv"pggfgf"rgt"3"WNVK
ÁÁÁÁÁÁÁÁÁÁÁÁb*~\Şã↔´æÁKÁ*ã↔´æVFİĠGÁEÁFæFÎÁLLÁFİĠİÁ11"Bcwfkv"rqvgpvkcn"qxgthnqy"kh"
ÁÁÁÁÁÁÁÁÁÁÁÁ11"rtkegZ3;4"@`4`478"1"3g3:
ÁÁÁÁÁÁÁÁcÁæ→bæÁ|
ÁÁÁÁÁÁÁÁÁÁÁÁ11"60"Ecnewncvg"kpvgtg"rtkeg"tcvkq"ht"eqpukuvgpv"rtkekpi"htocv
ÁÁÁÁÁÁÁÁÁÁÁÁb*~\Şã↔´æÁKÁÇFÁJÁFİGDÁEÁFæFÎÁĐÁ*ã↔´æVFİĠİ
ÁÁÁÁÁÁÁÁÁc
ÁÁÁÁc
```

Tgeq o o gp fcvkqpu

Kp"Wpkuy cr"x5"rgtrjgt{"nkdtct{."HwnnOcvj0o wnFkx"ku"wugf"vq"cmnqy"qxgtEqy"qh
cp"kpvgto gfkcvg"xcnwg"y kvj qwv"cp{"nquu"qh"rtgekukqp."cpf"cmnqyu"o wnvkrnkecvkqp
cpf"fkxkukqp"y jgtg"cp"kpvgto gfkcvg"xcnwg"qxgtEqyu"478"dkvu"*\$rjcpvq o
qxgtEqy \$+0

Kv)u"tgeq o o gpfgf"vq"wug" Ô|→Rá\âÊ↑|→↔{"vq"ecnewncvg"vjg"urqv"rtkeg"vq
rtgxgpv"qxgtEqy"cpf"gpuwtg"ceewtcvg"rtkeg"ecnewncvkqpu<

```
↔àÁÇ↔bŮ→\↔Ů~←æ^€DÁ|
ÊÁÁÁÁÁÁÁÁÁÁÁÁb*~\Şã↔´æÁKÁ*ã↔´æVFİĠGÁEÁFæFÎÁLLÁFİĠİÁÁÁÁÁÁÁÁÁÁÁÁ
ÊÁÁÁÁÁÁÁÁÁÁÁÁb*~\Şã↔´æÁKÁÔ|→Rá\âÊ↑|→↔{ÇFæFİÊÁ*ã↔´æVFİĠGÁFÁJÁFİGDİ
ÁÁÁÁÁÁÁÁÁÊÊÊ
```

vkemEwowncvkxgFgnvc "ku"pgi cvkxg

Ugxgtkv{

K o r c e v < " N q y

Nkmgknjqqf<"Jki j

F g u e t k r v k q p

Hqt"vjg"V YCR"ecnewncvkkp." \↔'←o|↑|→ā\↔{æÆæ→\á"ku"ecnewncvgf"cu"vjg
fkhhgtgpeg"dgv y ggp"vjg"v y q"vkemEw o wncvkgxu0"V jku"xcnwg"ku"fkkxfgf"d {"vjg"l tuv
vkem"ew o wncvkg"vq"qdvckp"vjg"vk o g/ygkijvgf"cxgtcig"vkem0

I kxgp"vj cv"Uqnfkv{ "fkxkukqp"vtwpecvgu"vj g"tguwnv."vj g"ghhgev"qh"vj ku"vtwpecvkqp"ku
fkhhgtgpv"fgrgpfkpi"qp"vj g"uk i p"qh" \leftrightarrow' \leftarrow 0 \mid \uparrow \mid \rightarrow \tilde{a} \setminus \leftrightarrow \{ \mathfrak{A} \mathfrak{A} \rightarrow \tilde{a} \} 0^0 \text{Kh}

\leftrightarrow' \leftarrow 0 \mid \uparrow \mid \rightarrow \tilde{a} \setminus \leftrightarrow \{ \mathfrak{A} \mathfrak{A} \rightarrow \tilde{a} \} "ku" rqukvkxg."c"vtwpecvkqp"y knn"fgetgcug"vj g"xcnwg"qh"vj g
vkem0" J qy gxgt."kh" \leftrightarrow' \leftarrow 0 \mid \uparrow \mid \rightarrow \tilde{a} \setminus \leftrightarrow \{ \mathfrak{A} \mathfrak{A} \rightarrow \tilde{a} \} "ku"pg i cvkxg."vtwpecvkpi"kvu"xcnwg
kpetgcugu"vj g"xcnwg"qh"vj g"vkem0

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IīīiĀĀĀĀĀĀĀĀ\ā\ā→@|→ā↵|\$~→ē~âbæā{æçbæˆ~^âbn&~bdāāæ\|āˆbā  

ĀāÇ↵^\IWYŸĀ↑æ↑~ā]Ā\↵'←O|↑|→ā\↵{æbÊĀ|↵^\FIJ€YŸĀ↑æ↑~ā]DĀ|  

IīīiĀĀĀĀĀĀĀĀĀĀĀĀ11"5c0"Ecnwncvg"vkog/ygkijvgf"cxgtcig"vkem  

IīeiĀ  

ĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀ↵^\IJĀ\↵'←O|↑|→ā\↵{æÆ→\āĀKĀ\↵'←O|↑|→ā\↵{æbYFŸĀĒĀ\↵'←O|↑|→ā\↵{æbY€Ÿİ  

IīFiĀĀĀĀĀĀĀĀĀĀĀĀĀ↵^\GHĀ\↵↑æÛæ↵&ā\æāN{æāā&æÛ↵'←ĀKĀ↵^\GH  

ĀāÇ\↵'←O|↑|→ā\↵{æÆ→\āĀĐĀ↵^\ĞGÇbæˆ~^âbn&~bY€ŸDDİ  

IīgİĀ  

IīĠiĀĀĀĀĀĀĀĀĀĀĀĀĀ11"5d0"Eqpxgtv"vkem"vq"rtkeg"swqvg  

IīHiĀĀĀĀĀĀĀĀĀĀĀĀĀĀ11"Cnyc{u"rcuu"WNVK"cu"dcug"vqmgp"  

11*cogwpv"qh"3g3:"?"3"WNVK+"cpf"kprvw"vqmgp"cu"swqvg"vqmgp  

IīiiĀĀĀĀĀĀĀĀĀĀĀĀĀĀ11"Vjku"gpuwtgu"yg"igv"vjg"rtkeg"kp"KPRWVaVQMGP1WNVK"hgtocv"  

11"eqpukuvpgpvni{\ā*ĀKĀŠăắ→æQ↵ăăăă]Ē&æ\T|~\æN\Ů↵'←Ç  

IīīiĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀ\↵↑æÛæ↵&ā\æāN{æāā&æÛ↵'←Ē  

IīīiĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀFæFiĒ11"coqwvpKp<"3"WNVK"vqmgp"*3:"fgekocnu+  

IīīiĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀāāāāabbÇ\ā↵bDĒ11"dcug"vqmgp"*WNVK+  

IıeiĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀ↵*|\Ů~←æˆNăăăabbĀ11"swqvg"vqmgp"*KPRWVaVQMGP+  

IıFiĀĀĀĀĀĀĀĀĀĀĀĀĀĀĀDİ
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V j g"ewttgpn" k o r n g o g p v c v k q p" f q g u" p q v" c f l w u v" v j g" V Y C R" x c n w g" y j g p
 \↔↖↞|↑|→ā↔{æææ→ā"ku"p g i c v k x g." y j k e j" e t g c v g u" c" f k u e t g r c p e{ "k p" v j g
 e c n e w n c v g f" V Y C R" x c n w g" f g r g p f k p i" q p" v j g" u k i p" q h" \↔↖↞|↑|→ā↔{æææ→ā 0

Tgeq o o gp f cvkqpu

[illegible]

Tgeq o o gp f cvkqpu

ÐÐÁÍÈÁÓá→´|→á\æÁăæàæăăă→Áâ~^|bÁá^ăÁă→~´á\æÁ↔\ÁăábæăÁ~^Á\ăæÁÛQÛØÁ↓|b\Á
ÁÁÁÁÁÁÁÐÐÁă→~´á\æăÁ\~Á\ăæÁ|bæăÁ↔^´→|ă↔^&Á\ăæÁb\ăæă←Áâ~^|b
ÁÁÁÁÁÁÁÇÁÁÁÁÁÁÁÁÁ
ÁÁÁÁÁÁÁÁÁÁÁăăăăăbbæăăæ´\↔{æÞæàæăăăăăÊ
ÁÁÁÁÁÁÁÁÁÁ|↔^GIIWăæàæăăăăÑ~^|bÊ
ÁÁÁÁÁÁÁÁÁÁ|↔^GIIWăæàæăăăăÑ~^|b
ÁÁÁÁÁÁÁÐÐÁK
ÊÁÁÁÁÁÁÁÁÁÁÁŽ|*ăă\æÞæàæăăăă→bÇăæàæăăăăÊÁ|→\↔Ô~ăÛbæăÛ↔\ăU\ăæă←Ñ~^|bÊÁ´]´→æDÌ
ÊÁÁÁÁÁÁÁÁÁÁÁŽ|*ăă\æÞæàæăăăă→b
ÊÁÇăæàæăăăăăÊÁ↔*|\Ů~←æ^N↑~|^ÊÁ|→\↔Ô~ăÛbæăÛ↔\ăU\ăæă←Ñ~^|bÊÁ´]´→æDÌ
ÁÁÁÁÇÈÈÈÐ
ÊÁÁÁÁ|^^\↔~^ÁŽ|*ăă\æÞæàæăăăă→b
ÊÁÇăăăăăăbbÁăæàæăăăăÊÁ|↔^GIIWÁ|→\↔Ů~R↔^ÊÁ|↔^ĞĜÁ´]´→æD
ÊÁÁÁÁ|^^\↔~^ÁŽ|*ăă\æÞæàæăăăă→b
ÊÁÇăăăăăăbbÁăæàæăăăăÊÁ|↔^GIIWÁ↔*|\Ů~←æ^ÞæàæăăăăÊÁ|↔^GIIWÁ|→\↔Ů~R↔^ÊÁ|↔^ĞĜÁ´]´→æD
ÁÁÁÁÁÁÁÁ*ă↔{á\æ
ÁÁÁÁÁÁÁÁăæ\|ă^bÁÇÁÁÁÁÁÁÁÁÁÁÁ
ÁÁÁÁÁÁÁÁÁÁÁăăăăăbbæăăæ´\↔{æÞæàæăăăăăÊ
ÁÁÁÁÁÁÁÁÁÁ|↔^GIIWăæàæăăăăÑ~^|bÊ
ÁÁÁÁÁÁÁÁÁÁ|↔^GIIWăæàæăăăăÑ~^|b
ÁÁÁÁÁÁÁÁD
ÁÁÁÁÇÈÈÈÐ
ÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÐÐÁÇ´ÈÁÛ*ăă\æÁăæàæăăăăăÇbÁă→~´á\æăÁă~^|bæbÁă^ăÁ´~^ã↔â|\↔~^b
ÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁ´→ă↔↑ăă→æÑ~^|bæbYăăăăæ´\↔{æÞæàæăăăăăŸÁĚKÁăæàæăăăăÑ~^|bÌ
ÊÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁŽ|*ăă\æO~^ã↔â|\~ăb
ÊÁÇ´]´→æÊÁæăăæ´\↔{æÞæàæăăăăÊÁĚÊÁ↑b&È{á→|æÊÁăæàæăăăăÑ~^|bDÌ
ÊÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁŽ|*ăă\æO~^ã↔â|\~ăb
ÊÁÇ´]´→æÊÁæăăæ´\↔{æÞæàæăăăăÊÁĚÊÁ↔*|\Ů~←æ^ÞæàæăăăăÊÁăæàæăăăăÑ~^|bDÌ

JO/28_ "Y tqpi"cuuw o rvkqp"vj cv"vjg"kprrwv
vqmgp"y knn"dg"Y G V J

Ugxgtkv{

Ko rcev<"Jki j

Nkmgkjq qf<"Nqy

Fguetkrvkqp

WNVK"ceegrvu"cp{"GTE42"vqmgp"cu"vjg"kprrwv"vqmgp"cpf"kp"vjg"eqpuvtwevqt."vjg
kprrwv"vqmgp"pw o dgt"qh" fgek o cnu"ku"uvqtgf"kp"vjg"↔^*|\Ů~←æ^Œæ´↔↑ă→b"xctkcdng0

GFİİÁÁÁÁÁ111"Bpqvkeg"Cfftguu"qh"vjg"kprrwv"vqmgp"*g0i0"YGVJ."FCK."gve0+
GGēİÁÁÁÁÁăăăăăbbárwðnke"↔↑↑|ăă→æĂ↔^*|\Ů~←æ^NăăăăbbÌ
ÁÁÁÁÇÈÈÈÐ
HIFIİÁÁÁÁÁÁÁÁÁ↔*|\Ů~←æ^Œæ´↔↑ă→bÁKÁØÓÐOĞĈŽ↔^*|\Ů~←æ^NăăăăbbDÈăæ´↔↑ă→bÇDÌ

Jqy gxgt."vjku"xcnwg"ku"pgxgt"wugf"cpf"uq o g"eqpuvcpvu"cpf"ecnewncvkqpu"ctg
dcugf"qp"vjg"cuuw o rvkqp"vj cv"vjg"kprrwv"vqmgp"y knn"dg"Y G V J."wukpi"vjg

gzrgevgf"xcnwg"qh"GVJ "hqt"ecnewncvkqpu0

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FĜĖiĀĀĀĀ11"Fgrqukv"cpf"geqpqoke"eqpuvcpvu
FĜFiĀĀĀĀ111"Bpqvkeg"Okpkowo"coqwpv"tgswktgf"hqt"c"fgrqukv"vq"dg"xcnkf"
11*20222223"GVJ+
FĜGiĀĀĀĀ111"Bfgx"Geqpqoke"eqpukfgtcvkqpu"hqt"okpkowo"fgrqukv<
FĜĜiĀĀĀĀ111"/"Cv"GVJ?&3.222.222<"okpkowo"?&3"yqtvj"qh"GVJ"*20222223"GVJ+
FĜHiĀĀĀĀ111"/"Uocnn"gpqwi j"vq"cnnqy"&3"fgrqukvu"gxgp"kh"vjg"rtkeg"qh"GVJ"iqgu"
11"vq"&30"rgt"GVJ
FĜIiĀĀĀĀ111"/"Rtgxgpvu"uvtgc m"dqpwu"icokpi"yjkng"ockpvckpkpi"ceeguukdknk v{
FĜJiĀĀĀĀ|↔^GIJĀrwdnke"´~^b\ā^ĀR0S0R0RŹ0ŠŠU0ŹŹNRŠŮSÚÁKĀĖĖĖĖĖFĀæ\āāāi
FĜiĀ
FĜĬiĀĀĀĀ111"Bpqvkeg"Kpkvkcn"tcvkq"WNVK<GVJ<"552222<3"Coqwpv"qh"WNVK"hqt"3"GVJ0
FĜİiĀĀĀĀ|↔^GIJĀrwdnke"´~^b\ā^Ā0S0Ů0N0ŹŹPNŮ0ŠĀKĀŮQŮ0ŽSŮRŇ0PĀĖĀFæHİ
ĀĀĀĀÇÈÈÈÈ
HİĖiĀĀĀĀĀĀĀĀ↔āĀ
ĀĀÇ↔^*|\Ů~←æ^NŮ~|↔^ĀJĀŮQŮ0ŽSŮRŇ0PĀĖĀFæFĬDĀæ{æā\ĀQā|^´âR↔^↔↑|Ů~|^āāāŮ↔{āā}ā]Pæ@|↔āāāÇ
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Cu"c"tguwnv."kh"vjg"kp r wv"vqmgp"ku"pqv"YGVJ."cpf"gurgekcnm{"kh"kv"fqgu"pqv"jcxg
3:"fgek ocnu."vjg"eqpvtcev"yknnpqv"yqtm"cu"gzrgevgf"cpf"oc{"ngcf"vq
wpgzrgevgf"dgjcxkqt0

Hqt"gzco rng."wukpi"WUFE"*8"fgek ocnu+"cu"vjg"kp r wv"vqmgp"yqwnf"tgswktg"vjg
qypgt"vq"fgrqukv"55"vtknkqp"WUFE"vq"ncwpej"vjg"eqpvtcev."y jkej"ku"pqv"hgcukdng0

Qp"vjg"qvjgt"jcpf."kh"YRQN"*Rqn{ i qp)u"pcvkxg"vqmgp"y tcr rgt+"y cu"wugf"cu"vjg
kp r wv"vqmgp."jcxkpi"vjg"RQN"vqmgp"c"owej"nqygt"xcnwg"vjcp"GVJ."vjg"xcnwg"qh
vjg"WNVK"vqmgp"kp"WUF"vgtou"yqwnf"dg"owej"nqygt"vjcp"gzrgevgf0

Tgeq o o gp fcvkqpu

Ocmg"vjg"R0S0R0RŹ0ŠŠU0ŹŹNRŠŮSÚ."0S0Ů0N0ŹŹPNŮ0Š."cpf"okpkowo"fgrqukv
coqwpv"eqpĭ iwtcdng"qp"eqpvtcev"etgcvkqp"cpf"wug"FĖĀĖĖĀ↔^*|\Ů~←æ^Ėæ´↔↑ā→b
kpuvgcf"qh"vjg"jctfeqfgf"xcnwg"qh"3g3:"hqt"ecnewncvkqpu"kp xqn xkp i"vjg"kp r wv
vqmgp0

]O/29_"FqU"qp"vjg"fgrqukv"hwpevkqp"fwg"vq
gzeguukxgn{"nqy"unkrrci g"vqngtcpeg

Ugxgtkv{

Ko rcev<"Ogfkwo

Nkmgkjqqf<"Ogfkwo

Fguetkrvkqp

Qp"fgrqukvu."rctv"qh"vjg"kprwv"vqmgpu"cpf"pgyn{"okpvgf"WNVK"vqmgpu"ctg"cf fgf
vq"vjg"rqqn"cu"nkswkfkv{0"Cu"c"unkrrci g"rtqvgevkqp"ogejcpkuo."cf fkp i"nkswkfkv{
tgxgtvu"y jgp"vjg"fkhhtgpeg"dgy yggp"vjg"V YCR"cpf"vjg"urqv"rtkeg"ku"itgcvgt
vjcp"RNVŽNĚŽQŠŽUQØŠŠNÖÓŽŇŠU"dcuku"rqkpvu0

Vjg"xcnwg"qh"vjku"eqpuvcpv"ku"ugv"vq"55"dcuku"rqkpvu0"Vjku"ogcpu"vjcv"hqt"xgt{
uocnn"xctckvkqpu"kp"vjg"urqv"rtkeg."vjg"vtcpucevkqp"y knn"tgxgtv."pqv"cnmq ykpi"wugtu
vq"fgrqukv"kprwv"vqmgpu0

Rtqqh"qh"Eqpegrv

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à| ^` \↔~^Ā\æb\Žăæ*~b↔\U↔* *á&æÇDĀ* | â↔~` Ā |  
ĀĀĀĀ11"Kpetgcug"rqqn"qđugtxcvkqp"ectfkpcnk{  
ĀĀĀĀ{Ĉŝ~→Ē↔^` āæábæŠábæā{ á\↔~^Oáăă↔^ā↔↔\]Sæ[\Çİ€Dİ  
  
ĀĀĀĀ11"Umkr"gctn{ "dktf"rgtkqf  
ĀĀĀĀb↔↔*ÇFĀăă]bDİ  
  
ĀĀĀĀ11"Uknowncvg" c" uycr" gxgt{ "pgy"dnqem" hqt" ;2"dnqemu  
ĀĀĀĀâ~ăĀÇ|↔^ \GIWĀ↔ĀKĀ€İĀ↔ĀJĀİ€İĀ↔ÉÉDĀ|  
  
ĀĀĀĀĀĀĀĀĀĀ\~←æ^Ø^İĀăăăăæbbÇ}æ\ăDÊ  
ĀĀĀĀĀĀĀĀĀĀ\~←æ^Š|\İĀăăăăæbbÇ|→\↔DÊ  
ĀĀĀĀĀĀĀĀĀĀăæİĀF€Ž€€€Ê  
ĀĀĀĀĀĀĀĀĀĀăă´↔↔æ^İĀăăăăæbbÇ\ă↔bDÊ  
ĀĀĀĀĀĀĀĀĀĀăăăă↔↔æİĀdnqem0vkoguvcorÊ  
ĀĀĀĀĀĀĀĀĀĀăă↑~|^ \Ø^İĀFÊ  
ĀĀĀĀĀĀĀĀĀĀăă↑~|^ \Š|\R↔^↔↑|↑İĀ€Ê  
ĀĀĀĀĀĀĀĀĀĀb@ă\ŝă↔`æQ↔↑↔\VİWİĀ€  
ĀĀĀĀĀĀĀĀcDİ  
ĀĀĀĀĀĀĀĀ{ĞĬ~|\æăĒæ[ă´\Ø^*|\U↔^&→æÇb}ă*ŝăăă↑bDİ  
ĀĀĀĀĀĀĀĀb↔↔*ÇFGĀbæ´~^ăbDİ  
ĀĀĀĀĀĀĀĀ{↑Ēă~→Çdnqem0vkoguvcorĀÉĀFDİ  
ĀĀĀĀc  
  
ĀĀĀĀ11"Etgcvg" c" uycr" vjcv" oqxgu" vjg" rtkeg" c" uocnn" coqwpv  
  
ĀĀĀĀĀĀĀĀ\~←æ^Ø^İĀăăăăæbbÇ}æ\ăDÊ  
ĀĀĀĀĀĀĀĀ\~←æ^Š|\İĀăăăăæbbÇ|→\↔DÊ  
ĀĀĀĀĀĀĀĀăæİĀF€Ž€€€Ê  
ĀĀĀĀĀĀĀĀăă´↔↔æ^İĀăăăăæbbÇ\ă↔bDÊ  
ĀĀĀĀĀĀĀĀăăăă↔↔æİĀdnqem0vkoguvcorÊ  
ĀĀĀĀĀĀĀĀăă↑~|^ \Ø^İĀ€Ê€WĀæ\ăăăÊ  
ĀĀĀĀĀĀĀĀăă↑~|^ \Š|\R↔^↔↑|↑İĀ€Ê  
ĀĀĀĀĀĀĀĀb@ă\ŝă↔`æQ↔↑↔\VİWİĀ€  
ĀĀĀĀcDİ  
ĀĀĀĀ{ĞĬ~|\æăĒæ[ă´\Ø^*|\U↔^&→æÇb}ă*ŝăăă↑bDİ  
ĀĀĀĀb↔↔*ÇFGĀbæ´~^ăbDİ  
ĀĀĀĀ{↑Ēă~→Çdnqem0vkoguvcorĀÉĀFDİ  
  
ĀĀĀĀ11"Fgrqukv" qp"WNVK"tgxgtvu"fwg"vq"rtkeg"unkrrci g  
ĀĀĀĀ{↑Ēæ[ *æ´\Pæ{æă\Çŝă↔`æĀb↔↔* *á&æĀ´ăă´←ĀDİ  
ĀĀĀĀ|→\↔Ēăæ*~b↔\Să\↔{æ|{ă→|æİĀ€Ē€€€FĀæ\ăăăçÇăăăăæbb  
ĀĀĀĀĀĀÇ€DĒĀ€ĒĀdnqem0vkoguvcorĒĀăă→bDİ  
c
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Tgeq o o gp f cvkqpu

Kpetgcug"vjg"xcnwg"qh" RNVŽNĚĚŽQŠŽUQØŠŠNÖÓŽŇŠU "vq" c" o qtg" tgcupcdng" xcnwg
y jkej "ceeqpvu" hqt" vjg" rtkeg" xqncvknkv { "qh" vjg" rtkeg" kp" vjg" rqqn0

]O/2:_ "V YCR"ecp"dg" o cpkrwncvgf

Ugxgtkv{

K o rcev<" O g fkw o

Nkmgkjqqf<" O g fkw o

Fguetkrvkqp

Vjg"eqpvtcev"wugu"vjg"V YCR"qtceng"vq"ecnewncvg"vjg"rtkeg"hqt"fgrqukvu"cpf
uycru"rgthqtogf"vjgtqwi j"vjg"rwo r"ogejcpku o0"Vjg"qdugtxcvkqp"ykpfaqy"ku"ugv
vq"3:037"okpwwgu0

Jqygxgt."vyq"kuuwgu"ecwug"vjg"V YCR"vq"dg"gcukn{ " o cpkrwncvgf<

30"Wpkuy cr"X5"rqqnu"ctg"kpkvknk | gf"ykvj"cp"qdugtxcvkqp"ectfkpcnk { "qh"3."y jkej
o gcpu"vjcv"vjg"V YCR"qtceng"y knn"qpn { "eqpukfgt"vjg"ncuv"rtkeg"wr fcvg0

40"Gxgp"kh"vjg"qdugtxcvkqp"ectfkpcnk { "ku"jki j"gpqwi j" hqt"vjg"qdugtxcvkqp
ykpfaqy."vjg"pwodgt"qh"qdugtxcvkqpu"tgeqtfgf"okijv"pqv"dg"gpqwi j0

Vjku"o gcpu"vjcv"cp"cvvcemgt"eqwnf" o cpkrwncvg"vjg"rtkeg"qh"vjg"WNVK"vqmgp0
I kxgp"vjcv"dqvj"vjg" äæ*~b↔\ "cpf"vjg" * | ↑ * "hwpevkqpu"jcxg"unkrrci g"rtqvgevkqp
ogejcpku o u."vjg"qwveq o g"qh"vjg"cvvcem"yqwnf"dg"vjg" FqU" hqt"vjgug"hwpevkqpu0

Tgeq o o gp f cvkqpu

30"Ecnn"vjg" øÛ^↔b} á * ŮĜš~→È↔^´ äæábæšâbæä { á\↔~^Oáäã↔^á↔↔\] Sæ[\ Ç | ↔^ \ FIJ
~âbæä { á\↔~^Oáäã↔^á↔↔\] Sæ[\ D "hwpevkqp"chvgt"vjg"kpkvknk | cvkqp"qh"vjg"rqqn
ykvj" c"xcnwg"jki j"gpqwi j"vq"eqxgt"vjg"qdugtxcvkqp"ykpfaqy0"Vjku"xcnwg
ujqwnf"dg"cv"ngcuv" ~âbæä { á\↔~^Û↔^ä~ } ÁÐ
á { æäá&æŇ→~´←šä~ä | ´\↔~^Pá&æšâÛâæSæ\ } ~ä← 0

40"Gpuwtg"vjg"pwodgt"qh"qdugtxcvkqpu"tgeqtfgf"ku"jki j"gpqwi j"vq"eqxgt"vjg
qdugtxcvkqp"ykpfaqy0

]N/23_ "Tqwpf kpi "gttqt"kp" gctn{ "dktf" fgrqukv

Vjg"WNVK"eqpvtcev"wugu"ØÓĤOG€Êá**ă~{æ"cpf"ØÓĤOG€Ê\ăă^bàæăôă~↑"vq"kpvgtcev
ykvj"jprwv"vqmgpu0"Jqygxgt."vjgtg"ctg"uqog"vqmgpu"vjcv"fqpùv"hqnnqy"vjg

KGTE42"kpvgthceg."uwej"cu"WUFV0"Vjku"eqwnf"ngcf"vq"vtcpucevkqp"tgxgtvu"y jgp
fgrnq{kpi"ceqpvtcev."ncwpejkpi"cpgy"rqqn."qt"fgrqukvkpi"vqmgpu0

Kv)u"tgeq o o gpfgf"vq"wug"hwpevkqpu"uwej"cu"hqtegCr rtqyg"cpf"uchgVtcpuhtgHtq o
htq o "vjg"UchgGTE42"nkdtct{ "htq o "Qrgp \ gr rgnkp"vq"kpvgtcev" y kvj "kprwv"vqmgpu0

JN/25_"Wukpi"urqv"rtkeg"kpukfg

**aecnewncvgVYCR*+ " o cmgu"eqfg"xwnpgtcdng"vq
rtkeg" o cpkrwncvkqpu**

Eqfg"wugu"Ž´á→´|→ā\æŮŨŦŦŦD"vq"rgthqt o "unkrrci g"ejgemu"cpf"rtgxgpv
o cnkekqwu"wugtu"htq o "gzvtcevkpi"xcnwgu"d{ " o cpkrwncvkpi"vjg"nkswkfkv{ "rqqn"cpf
kpvgtcevkpi" y kvj "vjg"WNVK"vqmgp0"Vjg"kuuwg"ku"vcv"Ž´á→´|→ā\æŮŨŦŦŦD" wugu"urqv
rtkeg" y jgp"kv"ecp)"ecnewncvg"vjg"VYCR"rtkeg"cpf"vjku"yqwnf" o cmg"kv"xwnpgtcdng
vq"rtkeg" o cpkrwncvkqp"cvvcemu0"Cp"cvvcemgt"ecp" o cpkrwncvg"vjg"rqqn)u"rtkeg"cpf
vjgp"fgrqukv"vqmgpu"kv" y qwnf"ecwug"WNVK"vq"rtqxfkfg"nkswkfkv{ " y jkng"vjg"urqv
rtkeg"ku" y tqpi"cpf"vjg"cvvcemgt"ecp"vjgp"gzvtcev"xcnwg"htq o "vjg"nkswkfkv{ "rqqn0

JN/26_"Cvvcemgt"ecp"etgcvg"ektewnct"tghgttcnu ykvj"ngpivju"qh"vjtggt"cpf"jkijgt

Eqfg"rtgxgpvu"ektewnct"tghgttcnu"qh"ngpivj"3"cpf"4"dwv"kv)u"uvknn"rquukdng"vq"etgcvg
dkiigt"nqqr"tghgttcnu" y kvj "dkiigt"ngpivj"cpf"icog"vjg"u{ uvgo0

↔āĀÇāæāæāāāāĀĀĀoui0ugpfgtDāāæ{ æā\ĀĀæ*~b↔\Oā^~\PæāæāUæ→āÇDĪ
ĀĀĀĀĀĀĀ↔āĀÇāæāæāāāābYāæāæāāāāYĀĀĀoui0ugpfgtDāāæ{ æā\ĀĀæ*~b↔\O↔ā´|→āāPæāæāāā→ÇDĪ

JN/27_"Wugt"urgekłgf"unkrrci g"ejgem"hqt rw o rlu y cr"ku"kpghłekgpv

Y jgp"cvqr"eqpvtkdwvqt" y cpvu"vq"rw o r"vjg"WNVK"vqmgp"vjg{"urgek{ "vjg
↑↔^Ů→\↔N↑~| ^\'vq"rtgxgpv"unkrrci g" y jgp"uycrkpi"vjg"kprwv"vqmgp"hqt"vjg
WNVK"vqmgp0"Vjg"kuuwg"ku"vcv"vjg"eqpvtecv"kprwv"vqmgp"coqwpv"oc{"kpetgcug
y jkng"vjg"wugt)u"rw o r"vtcpucevkqp"ku"kpukfg"vjg"og o rqqn"cpf"tgegxgf"WNVK
vqmgpu"htq o "vjg"uycr"ecp"dg"jkijgt"vjcp"↑↔^Ů→\↔N↑~| ^\' y jkng"vjg"uycr"jcu

$$\uparrow \leftrightarrow \hat{U} \rightarrow \backslash \leftrightarrow N \uparrow \sim \mid \wedge \backslash$$

igvInqdcnFcvc

&x\Ö→~âá→£á\á

FİİGiÄ
 ÄÄÄÄÄÄÄÄEÄM*äää↑Ä↔*|\Ú~←æ^Ø^QŞÄN↑~|^Ä~àÄ↔*|\Ä\~←æ^Ä´|ääæ^→]Ä↔^ÄÛ^↔b}ä*ÄÜĞÄ↔@|↔ä↔\

FİİGiÄ
 ÄÄÄÄÄÄÄÄEÄM*äää↑Ä→|↔Ø^QŞÄN↑~|^Ä~àÄÜQÜØÄ´|ääæ^→]Ä↔^ÄÛ^↔b}ä*ÄÜĞÄ↔@|↔ä↔\]Ä*~→

Ž&æ\Q↔@ | ↔ä↔\]N↑~ | ^\b

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fîiüÄÄÄÄÄà| ^\ ^ÄZ&æ\Q@| {ä↔\ ]N↑~| ^\bçDÄ↔^ \æä^ä^Ä { {æ} ÄÄæ\ | ä^bÄ
ÄÄç| {↔^ \GIJÄ↔^ *| \Ü~←æ^N↑~| ^\ÊÄ | {↔^ \GIJÄ | →\ ↯N↑~| ^\DÄ |
îîîîÄÄÄÄÄÄÄÄÄÄ | {↔^ \FGÎÄ↔↔ | {ä↔\ ] ÁKÄ↔↔ | {ä↔\ ] $~→Ë↔↔ | {ä↔\ ] çDî
îîîîÄÄÄÄÄÄÄÄÄÄç| {↔^ \FWEÄb@ä\ $ä↔^ æVîJÊÊÊÊÊÊÊDÄKÄ↔↔ | {ä↔\ ] $~→Ëb→\ €çDî
îîîiÄ
îîeiÄÄÄÄÄÄÄÄÄÄ11"Igv"ustv"rtkeg"cv"vjg"dqwpfctkgu"qh"qwt"rqukvkqp
îîîÄÄÄÄÄÄÄÄÄÄÄÄÄÄ | {↔^ \FWEÄb@ä\ Þä\ {↔~NVîJÄKÄÜ↔^ ←Rä\ äÊæ\ U@ä\ Þä\ {↔~N\ Ü↔^ ←çQ$ŽRØSŽÚØOPDî
îîGiÄÄÄÄÄÄÄÄÄÄÄÄÄÄ | {↔^ \FWEÄb@ä\ Þä\ {↔~NVîJÄKÄÜ↔^ ←Rä\ äÊæ\ U@ä\ Þä\ {↔~N\ Ü↔^ ←çQ$ŽRNvŽÚØOPDî
îîGiÄÄ
îîHÄÄÄÄÄÄÄÄÄÄÄÄÄÄç| {↔^ \GIJÄÄá↑~| ^\€ÊÄ | {↔^ \GIJÄÄá↑~| ^\FDÄK
îîîÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄÄQ@ | {ä↔\ ]N↑~| ^\bÊ&æ^N↑~| ^\bô~äQ@ | {ä↔\ ]
ÄÄçb@ä\ $ä↔^ æVîJÊÄb@ä\ Þä\ {↔~NVîJÊÄb@ä\ Þä\ {↔~NVîJÊÄ↔↔ | {ä↔\ ]Dî
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&æ\Ö→~âá→Ěá\á "hwpevkqp"ku"pgv"ceewtcvg0

øóƒog€Èâá→á^´æŠàçD

**]N/29_"Pq"uwr rqtv"hqt"hgg/qp/vtcpuht"kp rww
vqmgp**

Fgrqukvu"qh"kprrw"vqmgpu"cuuw o g"vjcv"vjg"co qwpv"qh"vqmgpu"tgegkxgf"d{"vjg
eqpvtcev"ku"vjg"uc o g"cu"vjg"co qwpv"qh"vqmgpu"ugpv"d{"vjg"wugt0"Vjku"ku"pqv"vjg
ecug"y jgp"vjg"kprrw"vqmgp"jcu"chgg/qp/vtcpuhgt"o ge jcpku o 0"Kh"vjku"y cu"vjg
ecwug."vjg"fgrqukvu"hckn"y jgp"vjgtg"ku"pqv"gpqwi j"dcncpeg"kp"vjg"eqpvtcev"vq
eqxgt"vjg"hgg."qt"y knn"eqpuw o g"vqmgpu"htq o "vjg"tgugtxg"y jgp"vjgtg"ku"gpqwi j
dcncpeg0

Kh"chgg/qp/vtcpuhgt"vqmgp"ku"wugf"cu"vjg"kprrw"vqmgp."vjg"→ǎ | ^´ǎ"hwpevkqp"ku
gzrgev"vq"tgxgtv."dwv"kv"o ki jv"pqv"dg"vjg"ecug"kh"vjgtg"ku"cfqpcvkqp"qh"vjg
kprrw"vqmgp"vq"vjg"eqpvtcev0

Kh"vjg"rtqvqeqn"y cpvu"vq"uwr rqtv"hgg/qp/vtcpuhgt"vqmgpu."kv"ujqwnf"ejgem"vjg
eqpvtcev"dcncpeg"dghgtg"cpf"chvgt"vjg"fgrqukv"cpf"wug"vjg"fkhgtgpeg"cu"vjg
fgrqukvgf"co qwpv0

Kh"vjgtg"ku"pq"kpvgpvkqp"vq"uwr rqtv"hgg/qp/vtcpuhgt"vqmgpu."kv"ku"cfxkucdng"vq
ejgem"kp"vjg"→ǎ | ^´ǎ"hwpevkqp"vjcv"vjg"co qwpv"qh"vqmgpu"tgegkxgf"d{"vjg
eqpvtcev"ku"vjg"uc o g"cu"vjg"co qwpv"qh"vqmgpu"ugpv"d{"vjg"wugt0

**JN/2:_"igvWugtFcvc"tgwtpu"vjg"y tqp i"uvtgcm
kprrw"wr rgt"dqwpfct{"hqt"e{eng"3**

Vjg"b\ǎǎǎ←0^*|\Ů~←æ^N↑~|^\'N~|^ǎǎǎ↔ǎb"xcnwg"tgwtpgf"d{"vjg"&æ\Ůbǎǎǎ\ǎ
ku"cvw rng"qh"* o kp."ocz+"kprrw"vqmgp"co qwpvu"pggfgf"vq"ockpvckp"vjg"uvtgcm"kp
vjg"pgzv"e{eng0

Y jgp"vjku"hwpevkqp"ku"ecnngf"hqt"e{eng"3."vjg"wr rgt"xcnwg"qh"vjg"dqwpfct{"y knn
dg"2."y jkej"ku"kpqttgev."cu"vjg"eqfg"fqgu"pqv"cr rn{"cp{"dqwpfct{"hqt"vjg"1 tuv
e{eng0

Cffkvkqpcmn{"kv"y qwnf"dg"tgeq o o gpf"vq"ejgem"vjcv"vjg"e{eng"pw o dgt"ku
itgcvt"vjcp"20

Eqpukfgt"cr rn{kp i"vjg"hqmqykp i"ejcpi gu<

à | ^ ^ \↔~^Á&æ\ÛbæãĖá\áÇ | ↔^ \ĠGÁ´]´→æÊÁáääãæbbÁ | bæãDÁæ[\æã^á→Á{ ↔æ } Áãæ\ | ã^bÁ
ÁÁÁÁÁÁÇÛbæãĖá\áÁ↑æ↑~ã]DÁ |
ĖÁ
ĖÁÁÁÁÁÁÁÁ | ↔^ \ĠIŲÁ↔^ * | \Ų~←æ^Ėæ*~b↔\æäšāæ{ ↔~ | bO]´→æÁKÁ\~\á→Ø^ * | \Ų~←æ^Ėæ*~b↔\æäY´]´→æÁĖÁF
ĖÁÁÁÁÁÁÁÁ | ↔^ \ĠIŲYĠŲÁ↑æ↑~ã]Áb\ãæá←Ø^ * | \Ų~←æ^N↑~ | ^\Ų~ | ^ääã↔æbÁK
ĖÁ
ĖÁÁÁÁÁÁÁÁÁÁÁÁÁY↔^ * | \Ų~←æ^Ėæ*~b↔\æäšāæ{ ↔~ | bO]´→æÊÁ↔^ * | \Ų~←æ^Ėæ*~b↔\æäšāæ{ ↔~ | bO]´→æÁĖÁFĖ
ĖÁÁÁÁÁÁÁÁÁæ@ | ↔æÇ´]´→æÁLÁĖĖÁÁO]´→æÁ^ | ↑ääãÁ↑ | b\Áää&ãæá\æäÁ\áá^ÁĖÁDĪ
Ė
ĖÁÁÁÁÁÁÁÁ | ↔^ \ĠIŲYĠŲÁ↑æ↑~ã]Áb\ãæá←Ø^ * | \Ų~←æ^N↑~ | ^\Ų~ | ^ääã↔æbĪ
Ė
ĖÁÁÁÁÁÁÁÁ↔ääÇ´]´→æÁKÁFDÁ |
ĖÁÁÁÁÁÁÁÁÁÁÁb\ãæá←Ø^ * | \Ų~←æ^N↑~ | ^\Ų~ | ^ääã↔æbÁKÁYĖĖÁ\] *æÇ | ↔^ \ĠIŲDĖ↑á [ŲĪ
ĖÁÁÁÁÁÁÁÁÁcÁæ→bæÁ |
ĖÁ
ĖÁÁÁÁÁÁÁÁÁÁÁÁÁ | ↔^ \ĠIŲÁ↔^ * | \Ų~←æ^Ėæ*~b↔\æäšāæ{ ↔~ | bO]´→æÁKÁ\~\á→Ø^ * | \Ų~←æ^Ėæ*~b↔\æäY´]´→æ
ĖÁ
ĖÁÁÁÁÁÁÁÁÁÁÁÁÁb\ãæá←Ø^ * | \Ų~←æ^N↑~ | ^\Ų~ | ^ääã↔æbÁKÁY↔^ * | \Ų~←æ^Ėæ*~b↔\æäšāæ{ ↔~ | bO]´→æÊÁ↔^ *
ĖÁÁÁÁÁÁÁÁc

JN/2;_ "FqU"xgevqt"kp"vjg"ncwpej"hwpevkqp

Vjg"rtqxxkukqpcn"qypgt"qh"vjg"eqpvtcev"ncwpejgu"vjg"WNVK"vqmgp"d{ "ecmnkpi"vjg
→á | ^ ^ á "hwpevkqp0"Kp"vjg"rtkxcvg"hwpevkqp" Ž´ãæá\æQ↔@ | ↔ä↔\] "kv"ejgemgf"vjcv
Wpkuycr"rqqn"hqt"vjg"WNVK"vqmgp"fqgu"pqv"gzkuv"cpf"kh"kv"fqgu."vjg"hwpevkqp
tgxgtvu0

ŲĠĤİÁÁÁÁÁá | ^ ^ \↔~^ÁŽ´ãæá\æQ↔@ | ↔ä↔\]
ÁÁÇ | ↔^ \ĠIŲÁ↔^ * | \Ų~←æ^Ô~äQŞĖÁ | ↔^ \ĠIŲÁääáä↔^æDÁ*ã↔{ á\æÁ |
ŲĠİİÁÁÁÁÁÁÁÁÁ11"30" Ejgem" kh" vjg" Wpkuycr" rqqn" cntgcf{ "gzkuvu
ŲĠŲİÁÁÁÁÁÁÁÁÁ11"Vjku" ejgem" rtgxgpvu" c" rqvgpvkcn" FqU" cvvcem" qp" vjg" bncwpejb"
11" hwpevkqp
ŲĠİİÁÁÁÁÁÁÁÁÁ11"Kh" cp" cvvcemgt" etgcvgu" vjg" rqqn" dghqtg" vjg" eqpvtcev" qypgt .
ŲĠİİÁÁÁÁÁÁÁÁÁ11"kv" yqwnf" tgxgtv" jgtg" kpuvgcf" qh" cnnqykpi" vjg" cvvcemgt" vq"
11" ocpkrwncvg" vjg" kpkvkcn" uvcvg
ŲĠİİÁÁÁÁÁÁÁÁÁáääãæbbÁ↔@ | ↔ä↔\]Ş~~~→NääãæbbÁKÁ | ^↔b} á*Ôá´\~ã]Ė&æ\Ş~~~→Çáääãæbb
ÁÁÇ\á↔bDĖÁ↔^ * | \Ų~←æ^NääãæbbĖÁQŞŽŲŲŲDĪ
ŲĖİİÁ
ŲĖİİÁÁÁÁÁÁÁÁÁ11"40" Etgcvg" cpf" uvqtg" rqqn" kh" kv" fqgup)v" gzkuv
ŲĖİİÁÁÁÁÁÁÁÁÁ↔ääÇ↔@ | ↔ä↔\]Ş~~~→NääãæbbÁKÁáääãæbbÇĖDDÁ |
ŲĖİİÁÁÁÁÁÁÁÁÁÁÁÁÁ↔@ | ↔ä↔\]Ş~~~→NääãæbbÁKÁ | ^↔b} á*Ôá´\~ã]Ė´ãæá\æŞ~~~→Çáääãæbb
ÁÁÇ\á↔bDĖÁ↔^ * | \Ų~←æ^NääãæbbĖÁQŞŽŲŲŲDĪ
ŲĖİİÁÁÁÁÁÁÁÁÁÁÁÁÁ↔@ | ↔ä↔\]Ş~~~→ÁKÁŲŲ^↔b} á*ŲĖŞ~~~→Ç↔@ | ↔ä↔\]Ş~~~→NääãæbbDĪ
ŲĖİİÁÁÁÁÁÁÁÁÁÁÁÁÁcÁæ→bæÁ |
ŲĖİİÁÁÁMLÁÁÁÁÁÁÁÁÁää{ æá\ÁQ↔@ | ↔ä↔\]Ş~~~→N→ääáá]Ų[↔b\bÇDĪ
ŲĖİİÁÁÁÁÁÁÁÁÁÁc

Y jkng"vjg"eqo o gpvu"uvcvg"vjcv"c" FqU"cvvcem"ku"rtgxgpvgf."vjku"ku"pqv"vjg"ecug0
Tgxgtvki"vjg"vtcpucevkp"kh"vjg"rqqn"cntgcf{ "gzkuvu"rtgxgpvu"vjg" o cpkrwncvkqp
qh"vjg"kpvkcn"rtkeg"qh"vjg"rqqn."dww"kp"fqkpi"uq."kv"etgcvgu"c" FqU"xgevqt0"Kh"cp
cvvcemgt"etgcvgu"vjg"rqqn"dghqtg"vjg"eqpvtcev"qypgt."vjg"→á | ^ ^ á "hwpevkqp" y knn
tgxgtv."hqteki"vjg"tgfgnrnq{ o gpv"qh"vjg"eqpvtcev0

Eqpukfgt"gzgewkpi"vjg"nqike"qh"vjg"→á|^'â"hwpevkqp"kp"vjg"eqpuvtwevqt"qh"vjg
eqpvtecv0

JN/32_"Pcvkxg"vqmgpu"tgegkxgf"d{"vjg tgegkxg"cpf"hcnnndcem"ecp"dg"nqemgf

Vjg"WNVK"eqpvtecv"ko rng o gpvu"vjg"ãæ'æ↔{æ"cpf"àá→âá'←"hwpevkqpu"vq"tgegkxg
pcvkxg"vqmgpu."dwv"fqgu"pqv"ko rng o gpv"cp{"nqike"vq"jcpfng"vjg o."uq"vjg{"yknndg
nqemgf"kp"vjg"eqpvtecv"kpfg1pkvgn{0

Kh"vjg"kpvgpvkqp"ku"vjcv"vjg"eqpvtecv"ceegrvu"fqpcvkqpu"vq"vjg"nqpi/vgt o"tgugtxg.
eqpukfgt"ko rng o gpvki"vjg"hqnnqykpi"ejcpi gu<

11"Tgegkxg"hwpevkqp

ÁÁÁÁãæ'æ↔{æÇDÁæ[\æã^á→Á^á]áâ→æÁ|

ÁÁÁÁÁÁÁÁãæ@|↔ãæÇ↔^*|\Ů~←æ^NääãæbbÁKKÁ}ää*~æäSá\↔{æŮ~←æ^NääãæbbDİ

ÁÁÁÁÁÁÁÁØÜää*~æäSá\↔{æÇ}ää*~æäSá\↔{æŮ~←æ^NääãæbbDËää*~b↔|\{á→|æİÁoui0xcnwgçÇDİ

ÁÁÁÁc

ÁÁÁÁ11"Hcnnndcem"hwpevkqp

ÁÁÁÁää→→ää'←ÇDÁæ[\æã^á→Á^á]áâ→æÁ|

ÁÁÁÁÁÁÁÁãæ@|↔ãæÇ↔^*|\Ů~←æ^NääãæbbÁKKÁ}ää*~æäSá\↔{æŮ~←æ^NääãæbbDİ

ÁÁÁÁÁÁÁÁØÜää*~æäSá\↔{æÇ}ää*~æäSá\↔{æŮ~←æ^NääãæbbDËää*~b↔|\{á→|æİÁoui0xcnwgçÇDİ

ÁÁÁÁc

Qvjgtykug."eqpukfgt"tg o qxkpi"vjg"ãæ'æ↔{æ"cpf"àá→âá'←"hwpevkqpu0

JN/33_"Rqvgpvkcn"qxgtEqy"kp" aigvUrqvRtkeg*+ fwtkpi"rtkeg"ecnewncvkqp

Vjg"aigvUrqvRtkeg*+"hwpevkqp"rgthqtou"fktgev"o wnvkrnkecvkqp"qh"b@ã\§ã↔'æVİİŮ
ykvj"kvugnh"vq"ecnewncvg"*ã↔'æVFİĞ"ykvjqwv"ejgemkpi"hqt"qxgtEqy0"Ukpeg
b@ã\§ã↔'æVİİŮ"ku"c"|↔^Fİİ€."vjg"o wnvkrnkecvkqp"eqwnf"qxgtEqy"kh"vjg"xcnwg
gzeggfu"GZFGİ0

Vjg"qxgtEqy"yqwnf"ecwug"vjg"vtcpucevqpu"vq"tgxgtv."rtgxgpkpi<

- Fgrqukvu"vjcv"ejgem"urqv"rtkeg
- Rwo ru"vjcv"tgn{"qp"rtkeg"ecnewncvkqpu
- Cp{"qvjgt"hwpevkqpu"wukpi"Ž&æ\U*~\§ã↔'æÇD

à | ^ ` \↔~^ÃŽ&æ\U*~\šă↔´æÇÐ↔^ \æă^ă→Ă {↔æ} Ăăă | ă^bĂÇ | ↔^ \GIŬĂb*~\šă↔´æDĂ |
 ĂĂĂĂĂĂĂ11"30"Igv"uswctg"tqqv"rtkeg"htqo"rqqn"unqv2
 ĂĂĂĂĂĂĂĂÇ | ↔^ \FIŬĂb@ă \šă↔´æVĨŬÊÊÊÊÊÊDĂKĂ↔@ | ↔ă↔ \š~↔~↔Êb↔~\€ÇDÎ

ĂĂĂĂĂĂĂĂ11"40"Uswctg"vjg"rtkeg"vq"igv"rtkegZ3;4
 ĂĂĂĂĂĂĂĂ | ↔^ \GIŬĂ*ă↔´æVĨĞĂKĂ | ↔^ \GIŬÇb@ă \šă↔´æVĨŬDĂÊĂ | ↔^ \GIŬ
 ĂĂĂĂĂĂĂĂ11*ustvRtkegZ;8+= "11"Bcwfkv"qngxhngy"kh"ustvRtkegZ;8"@ "4`34:

ĂĂĂĂĂĂĂĂÊÊÊ
 ĂĂĂĂc

Cffftguu"vjg"uegpctkq"y jgtg"b@ã*ã↔´æVİİJ"gzeggfu"4`34:0"Tghgt"vq"vjg
 &æ\T|~\æN\Ũ↔´←"hwpevkqp"kp"vjg"Qtceng"nkdtct{"htq o "Wpku y cr"x5"hqt"i wkfcpeg0

11"Ecnewncvg"swqvgCoqwpv"ykvj"dgvvtg"rtgekukqp"kh"kv"fqqgup)v"qxgthnqy"
 ÁÁÁÁÁÁÁÁ11"yjpg"ownvkrnkgf"d{"kvugnh
 ÁÁÁÁÁÁÁÁ↔ǺÇb@ǻ\ǻ↔~VİİǺJKǺ\]*æÇ|↔^\\FGÎDÊ↑á[DǺ|
 ÁÁÁÁÁÁÁÁÁÁÁÁ11"Ecnewncvg"swqvgCoqwpv"ykvj"jki jgt"rtgekukqp
 ÁÁÁÁÁÁÁÁÁÁÁÁÊÊÊÊ
 ÁÁÁÁÁÁÁÁcǺ↔bǺǺ|
 ÁÁÁÁÁÁÁÁÁÁÁÁ11"Ecnewncvg"swqvgCoqwpv"ykvj"ngygt"rtgekukqp
 ÁÁÁÁÁÁÁÁÁÁÁÁÊÊÊÊ
 ÁÁÁÁÁÁÁÁc

]N/34_"Nqukpi"uq o g"rctv"qh"vjg"uvtgcm"dqpwu
kh"fg rgukvki"kp" o wnvkrng"vtcpucevkqpu

Y j gp"wugtu" fgrqukv"kp"eqpvkpwqwu"e{engu"cpf"hqnnqy"vjg"fgrqukv"nk okv"ej gemu.
vjg"eqfg"ikxgu"uvtgcm"dqpwu"tgyctfu"dcugf"qp"vjg"pwodgt"qh"uvgcm"eqwpvu0"Qpg
qh"vjg"ej gemu"ku"vjcv"vjg"ewttgpv"e{eng"fgrqukvu"owuv"dg"jki jgt"vjcp"vjg"rtgxkqw
e{eng"fgrqukvu"cpf"kh"vjcv"u"pqv"vjg"ecug"vjgp"vjg"eqfg"fqgup)v"ikxg"c"uvtgcm
dqpwu"hqt"vjg"wugt()

11"30"Ewowncvkxg"kprvw"vqmgp"fgrqukvu"vjku"e{eng"ku"vqq"ngy"eqorctgf"vq"
 ÁÁÁÁ11"rtgxkgwu"e{eng
 ÁÁ
 ÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁá~→Á→}o|↑|→á\↔{æÆ*~b⇨\Ű~~Q~}ÁKÁ↔^*|\Ű~←æ^Æ*~b⇨\æäô~ão]´→æSÁJÁ↔^*|

ÁÁÁÁÁÁÁÁ11"40"Ewowncvkxg"kprvw"vqmgp"fgrqukvu"vjku"e{eng"ku"vqq"jki j"eqorctgf"vq"
 ÁÁÁÁÁÁÁÁ11"rtgxkgwu"e{eng
 ÁÁ
 ÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁÁá~→Á´|↑|→á\↔{æÆ*~b⇨\Ű~~Ô↔&âÁKÁ↔^*|\Ű~←æ^Æ*~b⇨\æäô~ão]´→æSÁLÁFĖÁÉÁ↔

ÁÁÁÁÁÁÁÁ11"60"Wrfcvg"uvtgcm"eqwpv"dcugf"qp"fgrqukv"xcnkfkv{
 ÁÁÁÁÁÁÁÁ↔àÁÇÂ→}o|↑|→á\↔{æÆ*~b⇨\Ű~~Q~}ÁBBÁÁ´|↑|→á\↔{æÆ*~b⇨\Ű~~Ô↔&âDÁ|
 ÁÁÁÁÁÁÁÁÁÁÁÁb\ääá←O~|^bY´]´→æÿY|bääÿÁKÁb\ääá←O~|^bY´]´→æÁÉÁFÿY|bääÿÁÉÁFÎ
 ÁÁÁÁÁÁÁÁcÁ↔→bæÁ|
 ÁÁÁÁÁÁÁÁÁÁÁÁ11"Dtgc m"vjg"uvtgcm
 ÁÁÁÁÁÁÁÁÁÁÁÁb\ääá←O~|^bY´]´→æÿY|bääÿÁKÁFÎ
 ÁÁÁÁÁÁÁÁÁc

Vjg"kuuwg"ku"vjcv"kh"vjg"wugt"fgrqkvu"jku"vqmgpu"kp"o wnvkrng"vtcpucevkqpu"kp"qpg
e{eng"vjgp"hqt"vjg"gctn{"fgrqkvu"kp"vjg"e{eng"wugt"yqp)v"tgegkxg"vjg"uvtgcm
dqpwu"cpf"qp{"yqwnf"tgegkxg"vjg"uvtgcm"dqpwu"y jgp"vjg"co qwpv"qh"fgrqkvu"kp
vjg"ewttgpn"e{eng"igvu"dkigt"vjcp"vjg"rtgxkqwu"e{eng0"Vjku"yqwnf"rtgxgpn"wugtu
htqo"tgegkxkpi"chwnn"uvtgcm"dqpwu"kh"vjg{"fgrqkv"kp"o wnvkrng"vtcpucevkqpu"cpf
wugtu"jcxg"vq"fgrqkv"qp{"y jgp"vjgkt"fgrqkv"co qwpv"ku"dkigt"vjcp"vjgkt
rtgxkqwu"e{eng"fgrqkvu0"Y jkng"vjku"yqwnf"ecwug"wugtu"vq"fgrqkv"ncvg"cpf"vjgkt
fkueqwpvgf"eqpvtkdwvkqp"yqwnf"dg"nqygt0

Ejcpig"vjg"dqpwu"ecnewncvkqp"uq"kv"fqgup)v"fgrgpf"qp"jqy"ocp{"fgrqkvu"wugtu
ocmg0"Qpg"uqnwvkqp"yqwnf"dg"vq"cff"cejgem"vjcv"kh

Ç\~\á→0^*|\Ű~←æ^Œæ*~b↔\æäY´]´→æŸY|bæãŸÁJ

\~\á→0^*|\Ű~←æ^Œæ*~b↔\æäY´]´→æÁĚÁFŸY|bæãŸDÁá^ä

Ç\~\á→0^*|\Ű~←æ^Œæ*~b↔\æäY´]´→æŸY|bæãŸÁĚÁ↔^*|\Ű~←æ^Œæ*~b↔\æäÁL

\~\á→0^*|\Ű~←æ^Œæ*~b↔\æäY´]´→æÁĚÁFŸY|bæãŸD"vjgp"uw o"qh"ewttgpn"e{eng

fgrqkvu"ku"gpvgtkpi"vjg"xcnkf"kpvgtxcn"cpf"eqfg"ujqwnf"ecnewncvkpi"uvtgcm"dqpwu
hqt"cnn"vjg" \~\á→0^*|\Ű~←æ^Œæ*~b↔\æäY´]´→æŸY|bæãŸÁĚÁ↔^*|\Ű~←æ^Œæ*~b↔\æä0