



jscrip ter

jscrip ter

jscrip ter

jscripiter

(: 2009 8 22)

Pyth !
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H ž Ÿ “ ” mm

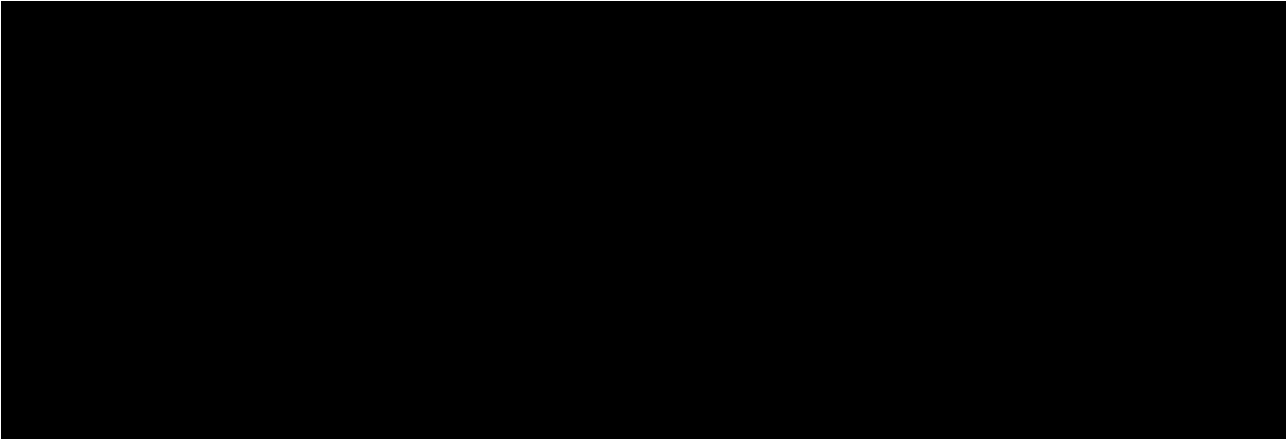
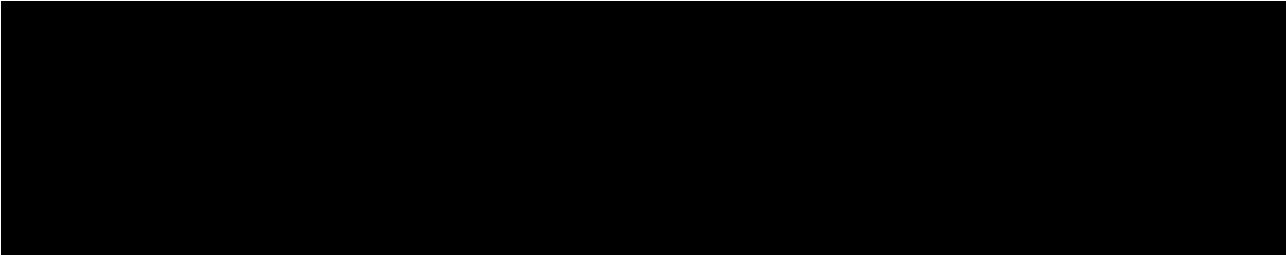
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--- >e; ;(!):
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AC28800
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e f ...

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*F**G*

Pyth !
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C • Óê

```
--- >e; ;Oct(!):  
... ;! . :  
... Jhi1e ! - ::  
... ;! K. !  
... ! ,. :  
... retur! ;!  
...  
--- ;Oct(:0)  
AC28800  
---
```

Õ
Y
Zz Ê H ® ž

```

--- >e; ;Oct(!):
... i; ! - ::
... retur! ;Oct(!,:) K !
... else:
... retur! !
...
--- ;Oct(:0)
AC28800
---
```

mm
k È t ... ç ... •• è a Î Á ef
d Y ... ç ... mm ç Y t t ä
d mm ç Y
{ # Wd éê ç]
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Õ > mm
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... U Ì Í g a ¬ ë
ç ... ' ü î mm à ü
Y
Õ k ç s mm
ü ç û 1 ... a *k* ... k k
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k ... Y
*i f ? * a o ç € Ž í î
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ç ñ Ì ç û a t w h Í
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... 8 Y
H ô ä ç 8 Þ õ , ö Ó] 9 ÷ Ú
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ý /} ¼ N I H
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$\hat{}$	$\hat{}_a$	$\hat{}_b$	B	Y
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$$\frac{1/2!}{2/2!} \quad k \quad q \quad 8 \quad \frac{3}{4} \quad \tilde{O}Y$$

H È û Î Á

Y
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à Š q 8 y z ä Ð

>e; ;Oct(!):
i; ! - ::
 retur! ;Oct(!,:) K !
else:
 retur! !

q r n o z s • • è ÖY

y ¾ 8 ÖY

¾ a d Y

l 1 É Ê ¹ Þ Z[ÖY 8 H ç ç

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;Oct(A) . ;Oct(2) K A

s j Ö

> * * * a ÖY

;Oct(2) . ;Oct(:) K 2

a Y

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;Oct(2) . : K 2
;Oct(A) . : K 2 K A

* * ! á

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e f e f ÆÇ Ö

(Xd - c d û a

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d mm Y

A L l æ TUV

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 à Š g Õ z à Š ÆÇ
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--- >e; ;Oct(!? r.):
... i; ! L 2:
... retur! r
... else:
... retur! ;Oct(! , :? r K !)
...
--- ;Oct(:0)
AC28800
---
```

p à Š ... hl ... hl —
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 a d a A Î ê L
 3 " a A Î ê V L
 a a , à Š Wd Y
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 à Š è t w à ü
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 8 s ç û — ß ç û ^ < . ,
 s Wd ÛÚ ef a s a a
 Í hi ? Wd Î Æ_ 1 s Wd a
 ç û Ç Y... Wd ÆÇ Y
 ' H Ê û ± û Y
 H S
 K ... t ¾ N k

d ÛÚ

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 " 9 Ê û ßZ x Ž H ` L ' Ý 8
 à Mà M ž N ‰
 N t ‡ " H ! "
] ÷ è
 ... â ž Õ , "

d ã í h í # h f Y
 Í # h Y
 H L Ž \$ %

$$a \neq 0 \qquad ax^2+bx+c=0 \qquad x \quad \acute{I} \quad \frac{-b \pm \sqrt{b^2-4ac}}{2a}$$

Y
 H s € a c d ç û
 ¹ Ð x í í ê
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 d N
 è Õ
 dY) Y > / ...† ç û á
 ç û d 2³×2³ , Y
 d Y
 e f Y + j , e f Y
 æ^a æ^a æ^a
 2×2×2×2×2×2=2⁶ × s € mm
) . + Õ

$$\left\{ \begin{array}{l} x^a \times x^b = x^{a+b} \\ (x^a)^b = x^{a \times b} \end{array} \right\} \quad \tilde{O}Y$$

æ^a √2 ¶ a Y

' X OÄ a 1) Y
dY
è è g Õ c û h
 $2=\sqrt{2}\times\sqrt{2}$ $2=\sqrt{2}^2$ $\sqrt{2}=2^x$ $2=2^{x^2}$ $2=2^{x\times2}$
w 2^1 $2^1=2^{x\times2}$ $1=x\times2$ Y
d d $\frac{1}{2}$ Y
' X
2] ÷ mm • • • á
æ^a t h

(, = * (=KK2 , @K0Kc)KK(:P2))P(2 K 0)

a mm
â ž Y N s | ... a 1
,

ë ã y ¶ 8

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--- >e; ;():  
... retur! 2?:0  
...  
--- ;()  
(2? :0)
```

D3 † Õ
4 ¶ ó
_ Ž ¾

```
--- r . ;()  
--- rQ0R  
2  
--- rQ:R  
:0  
---
```

56 ý 7 d 8 ½ ä š ½
Í ... a Õ
Y
Ž 1 G mm e f h Ç Õ

```
S s 10: .py  
  
>e; s 1(0? =? c):  
r0 . (, = * (=KK2 , @K0Kc)KK(:P2))P(2 K 0)  
r: . (, = , (=KK2 , @K0Kc)KK(:P2))P(2 K 0)  
retur! r0? r:  
  
0 . :  
  
Jhi1e 0 H. 0:  
0 . eT01(i!put(E0. E))  
= . eT01(i!put(E=. E))
```

```
c . eT01(i!put(Ec. E))
pr!t(s 1(0?=?c))
```

Y
a „ ... Ê
dY Y
^ ? yz s

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U:VPyth !Test-pyth ! s 10: .py
0. :
=. ,D
c. :2
(@.0? A.0)
```

a Y
c û u j
j½ Nî A u j a mm

```
0. 0
=. 0
c. 0

Tr0ce=0cW (< st rece!t c011 10st):
!i!e EU:VPyth !Test-s 10: .pyE? !i!e :@? i! L< >u!e-
pr!t(s 1(0?=?c))
!i!e EU:VPyth !Test-s 10: .pyE? !i!e @? i! s 1
r0 . (,= * (=KK2 , @K0Kc)KK(:P2))P(2 K 0)
Xer YiTisi !Err r: ;1 0t >iTisi !

U:VPyth !Test-
```

u a mmH{ u j Õ
Y
H{ L A | ž Ÿ Y
o Nî A ef û
v mm
9 Õ:
mm

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j s s ** s * * ** < < *
½

j ℰ , j ,
jj ½

j ℰ , j ,
j ℰ , j ,
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€ , !,

mm
=
j
j s
j
j ½ ½
j ½
!
=
>

ÖY
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L H Y
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« Ö O B Nî A A
... î ç â æ ÖY ...
è
q d Ä ... ÖY
¶ Y
d mm mm

C € €
€ €
j C € , j ,
jj ½
j C € , j ,
j C € , j ,
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€ , !,

g ... f ½ ê h ÖY
D Y
dY ê } d ¹ h
û € × Í
á

× Í no Y
d ÿE× mm
d d mm ** s * * ** < 8 ef mm

j ** s * * ** <
½j s k < *
j s s < *
½

ht < p û a mm
f Õ ÖP c

j ** s * * ** <
j s k < *
s

dY ... Y
: „ N > F
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Y
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$$\mathbf{X}^T \mathbf{A} \mathbf{N} \beta = \hat{\mathbf{p}}_k - \left(\mathbf{Z}^T \mathbf{A} \mathbf{N} \mathbf{X} \right)^{-1} \mathbf{Z}^T \mathbf{A} \mathbf{N} \mathbf{X}$$
$$\left(\frac{F}{Y} \right) \sim \left(\frac{Z}{Y} \right)^{-\frac{1}{2}} \quad \text{mm}$$

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€ 8 € 5 € 7 € 8 € f

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$$- \mathbf{x}^T \hat{\mathbf{u}}_i \quad \mathbf{u}_i^T \mathbf{A} \hat{\mathbf{u}}_i \quad \hat{\mathbf{u}}_i^T \tilde{\mathbf{a}}^3 \mathbf{a}$$
$$\begin{array}{c} \text{Y} \quad \text{u} \quad \text{u}_- \quad \text{S} \quad | \quad \text{A} \\ \text{^} \text{u} \text{O} \text{ } \frac{1}{4} \text{ } \text{o} \quad \text{Q} \text{u} \text{O} \text{ } \frac{1}{4} \quad , \quad \text{vz} \quad \text{f} \quad \text{a} \end{array}$$

w $\hat{E}\hat{E}$ 6 $5\hat{u}\hat{v}$ bc \ddot{e} $\frac{1}{2}\frac{3}{4}$ \hat{u}_- dd Y
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$$\tilde{a} \quad \tilde{f} \quad \tilde{h} \quad \tilde{f} \quad \# \tilde{h} \quad ax^2+bx+c=0 \quad a \neq 0$$

$$(ax^2+bx)+c=0$$

$$a\left(x^2+\frac{b}{a}x\right)=-c \quad \left(x^2+\frac{b}{a}x\right) > Y_{\mathcal{L}}$$

$$\left(x^2+\frac{b}{a}x\right)=\frac{-c}{a}$$

$$\mathfrak{z} > Y_{\mathcal{L}} \quad (x+a)^2=x^{+2ax}+a^2 \quad x^2+a=\left(x+\frac{a}{2}\right)^2-\left(\frac{a}{2}\right)^2$$

$$\left(x+\frac{b}{2a}\right)^2-\frac{b^2}{4a^2}=\frac{-c}{a} \quad \left(x+\frac{b}{2a}\right)^2=\frac{b^2-4ac}{4a^2}$$

$$\left(x+\frac{b}{2a}\right)^2=\frac{b^2}{4a^2}+\frac{-c}{a} \quad \text{jjjjj} > x+\frac{b}{2a}=\pm\sqrt{\frac{b^2-4ac}{4a^2}}$$

$$\left(x+\frac{b}{2a}\right)^2=\frac{b^2}{4a^2}+\frac{-4ac}{4a^2} \quad x+\frac{b}{2a}=\frac{\pm\sqrt{b^2-4ac}}{\pm\sqrt{4a^2}}$$

$$\frac{\pm x}{\pm y} \quad \frac{x}{y}, \frac{-x}{y}, \frac{x}{-y} = \frac{-x}{y}, \frac{-x}{-y} = \frac{x}{y} \quad \text{h i} \quad \frac{\pm x}{y}$$

$$x+\frac{b}{2a}=\frac{\pm\sqrt{b^2-4ac}}{2a}$$

$$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a} \quad \# h$$

$$x=\frac{-b\pm\sqrt{b^2-4ac}}{2a}$$

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>e; eZilput(p):
Jhi1e ::
  try:
    s . ilput(p)
    ; r ) i! s:
      i; ! t ) i! E0:2A@2CD89,E: r0ise E)cepti !(/ilput err r/)
    r . eT01(s)
    =re0W
  e)cept E)cepti ! 0s E:
    prilt(E)
    prilt(Eilput !u<=erHE)
    c !tilue
  retur! r

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F H u à G

S s 10A.py

```
>e; s 1(0?=? c):
); . 10<=>0 W:(,*WK(=K=,@KOKc)KK0.2)P(2K0)
retur! );(:)?);(:)
```

```
>e; eZi!put(p):
    retur! eT01(i!put(p))
```

```
Jhi1e ::
  print(E . 0)[2 * =) * cE)
  0 . eZi!put(E0. E)
  i; 0 .. 0: =re0W
  = . eZi!put(E=. E)
  c . eZi!put(Ec. E)
  print(E , - E? s 1(0?=?c))
```

```
pr i ! t (EThe E! >HE)
```

F a Gu Í # h

```
--- s 1 . 10<=>0 0?=c:Q(,*WK(=K=,@K0Kc)KK0.2)P(2K0) ; r W i ! (:?, :)R
```

```
--- s 1(:?,D?:2)
```

Q@.0? A.0R

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sp1it(EF?Y?UE? StrSuit? E?E)] StrSuitQ0R.ESE]

sp1it(E ?? A? @? ?? C? D? 8? 9?:0? d? e? fE? Str00!W? E?E)] Str00!WQ0R.E AE]

SS U0r>sQWey? 22R] SS a b c g h

SS T0=1eQ22R] SS i j

sp1it(E=?c?>?e?;?gE? Nt A? E?E)] Nt A00R.E0E]

sr0!>()) SS _4\$kl m

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SS t u b v w q x j \$ y z { n | } ~•

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SS U0r>St0tQ22R] SS 0.† u b v w? :. u b v w • ? 2. ‡ ^ ? @. f „ • ,

; r(i.0] iL22] **i) U0r>St0tQ i R.0]

SS Tur!] SS %Š 0:< Œ: :U•G
 Tur! . 0]
 SS scQ2R] SS f „ Ž 4 0.< ?:.U•G
 scQ0R.scQ: R. 0]

SS t • • ' ' " " r • • — — 7 ~ q
 `etG0).@8P2 , ((H (isP0ir(@9?20) ™™ isP0ir(@9?2:) ™™ isP0ir(20?2:)))š: :0)]
 Jhi1e(`etG0)-scQ0R*scQ: R)\
 c0r>Yisp(0)]
 i;(Tur!..0) <0!()] e1se c <())]
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 T0=1eQpR . p]
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 SS a b c n s •
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 ;u!cti ! sJ0p(p: ?p2? t<p)\ t<p . T0=1eQp:R] T0=1eQp:R . T0=1eQp2R] T0=1eQp2R . t<p] ^
 ;u!cti ! shu;;1e(i)
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 ; r(i.0] iL22] **i) sJ0p(r!>(22)? i)] SS i j i € £ ¤ ¥ ¦ § ¨ ...
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SS

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SS • ' - °
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;u!cti ! isP0ir(p:?p2)\ retur! U0r>sQEr0!WE? T0=1eQp:RR .. U0r>sQEr0!WE? T0=1eQp2RR] ^
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SS
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SS
;u!cti ! t P s(str? r?c?s)
\
  r.su=str(str?2?:) *0]
i; (:L.r ¶¶ rL.D)\
  s.t 1 Jer(su=str(str?:?:))]
  ; r(c.0] cLD] **c) i;(s..Nt AQcR) retur! (r,: )KD*c]
^
  retur! ,:]
^

```

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SS
SS t $.
SS
;u!cti ! c0r>Yisp(e!>SJ? r?c?str?p s)
\
syste<(Ec1sE)] S c1e0r scree!,,i; c1s > es ! t J rW? try Ec1e0rE
```

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SS 0...2...0...2...0...2...0...2...0
SS      ,0,      ,=,      ,c,      ,>,      ,e,      ,;,      ,g,
SS :) Q111RQ111RQ111RQ111RQ111RQ111RQ111R ( :
SS      QšššRQšššRQšššR      U•G:99 P 99:°•»
pri!t E      ,0,      ,=,      ,c,      ,>,      ,e,      ,;,      ,g,E
; r(r.0] rLD] **r)\
  pri!t;(E1>) E? r*:.)]
  ; r(c.0] cLD] **c) pri!t;(E12sE? c0r>Str!g(e!>SJ? rKD*c))]]
  pri!t;(E (1>V!E? r*:.))
^
pri!t E      ,0,      ,=,      ,c,      ,>,      ,e,      ,;,      ,g,E
pri!t;(EV!      E)]
; r(p s.0] p sLA] **p s)
  pri!t;(E1sE? (e!>SJH.:)š(EQšššRE):c0r>Str!g(e!>SJ?DKD*p s))]]
pri!t;(E      U•G:1,2> P 12>:°•»V!V!E? scQ:R? scQ0R)]

pri!t;(EPeep:E)] >e1ete Peep] >ispSt0t(Peep?:.)]
pri!t;(ET0We:E)] >e1ete T0We] >ispSt0t(T0We?@)]
pri!t;(E1Ks1sE? 2? EE? Str00!WQ0R)]
; r(r.:] rL:A] **r) pri!t;(E™1sE? Str00!WQrR)]
pri!t EV!E)]
^
;u!cti ! c0r>Str!g(e!>SJ?p s)

```

```

\
i;(e!>SJH.: ¶¶¶ (U0r>St0tQp sR..0 TM U0r>St0tQp sR..:))
  retur! EQ111RE]
i;(U0r>St0tQp sR..2 TM U0r>St0tQp sR..A TM e!>SJ...: ¶¶¶ U0r>St0tQp sRH.@)\
  i;(e!>SJ...: ) U0r>St0tQp sR.: ]
  retur! spri!t;((e!>SJ...: )š(EQ1s1sRE):(EL1s1s-E)?
    StrSuitQU0r>sQEsuitE? T0=1eQp sRRR?
    Str00!WQU0r>sQEr0!WE? T0=1eQp sRRR)
^
  retur! EE]
^
;u!cti ! >ispSt0t(t=1?st0t? i?r)
\
; r(i.0] iL@9] **i)
  i;(U0r>St0tQiR..st0t TM U0r>St0tQiR..st0t*2) **t=1QU0r>sQEr0!WE? T0=1eQiRRR]

pri!t;(E12>E? t=1Q0R)]
; r(r.:] rL:A] **r) pri!t;(ETM12>E? t=1QrR)]
pri!t EE]
^

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SS
;u!cti ! <0!( t<p?p:p2)
\
  SS 2| $a b c $¼½n -¾
  p:..Jhich()) U0r>St0tQp:R*.2] c0r>Yisp(0)
  > \ p2.Jhich()) ^Jhi1e(p:...p2)]
  > `et(p:?p2)]
^
;u!cti ! Jhich( p?t<p)
\
  > \
    pri!t;(E¿hichš- E)]
    p...: ] > \ t<p.EE] get1i!e t<p] ^Jhi1e(t<p...EE)] p.t P s(t<p)]
    i;(pL0) p.t P s(su=str(t<p?2?:) su=str(t<p?:?:)) SS (À $ x Á):?2² ...« n - -
    ^Jhi1e(pL0 TM (p-.0 ¶¶¶ U0r>St0tQpR..@)) ]
    retur! p]
^

SS
SS  $\mathcal{F}_n \hat{A}^n$ 
SS
;u!cti ! > `et(p:?p2)
\
  i;(U0r>St0tQp:RL2) U0r>St0tQp:R*.2]

```



```

i;(U0r>St0tQp2RL2) U0r>St0tQp2R*.2]
c0r>Yisp(0)
i;(Tur!...:)
pri!t;(EU < try- 1s 1s1> 1s1>V!E?
Str0tegy? Nt Aqp: 1DR? i!t(p:PD)*: ? Nt Aqp21DR? i!t(p2PD)*: )]
i;(isP0ir(p: ?p2))\
U0r>St0tQp: R. U0r>St0tQp2R. @]
**scQTur!R]
,,Tur!] SS Ã° ¥ÄÁÄ• Æ' Ç•
^e1se\
U0r>St0tQp: R. U0r>St0tQp2R. : ]
pri!t E... ! <0tchE]
^
pri!t;(E(push E!ter)E)] get1i!e t<p]
^

```

```

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SS U•G <0i!
SS
;u!cti ! c <( i?!?p?)?1ist?c!t?È)
\
SS ubvw• , $• ' nÉ ~
Str0tegy. E/Je11,W! J! /E]
).0]
>e1ete p]
; r(!.0] !L: A] **) \
i;(PeepQ!R-.2)\
; r(i.0] iL@9] **) \
i;(U0r>St0tQiR...: ¶¶ U0r>sQEr0!WE? T0=1eQiRR...!) pQ)**R. i]
> `et(pQOR?pQ: R)]
retur!]
^
^

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```

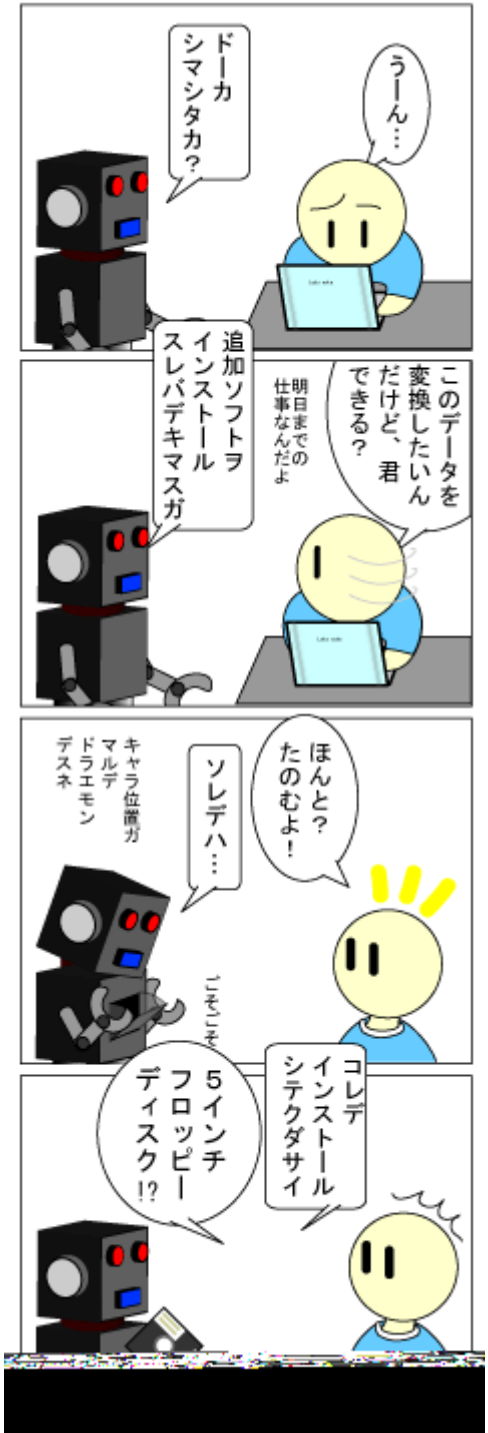
SS †ubvw$Ê j : Ê§l ...
Str0tegy. E/preTi us1y,e)isti!g 2!>/E]
c!t.0]
>e1ete 1ist]
; r(i.0] iL@9] **) i;(U0r>St0tQiR..0) 1istQc!t**R. i]
i;(PeepQ! .U0r>sQEr0!WE? T0=1eQpQOR. 1istQÊ. r!>(c!t)RRRR-..)\
SS ubvw• , $Ê j • ' nÉ ~
; r(i.0] iL@9] **) \
i;(U0r>St0tQiR...: ¶¶ U0r>sQEr0!WE? T0=1eQiRR...)\
> `et(pQOR?i)]
retur!]
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Str0tegy.E/0t r0!> </E]
1istQÊR.1istQc!t,:R] ¸,c!t]
> `et(p00R?1istQr!>(c!t)R)]
^

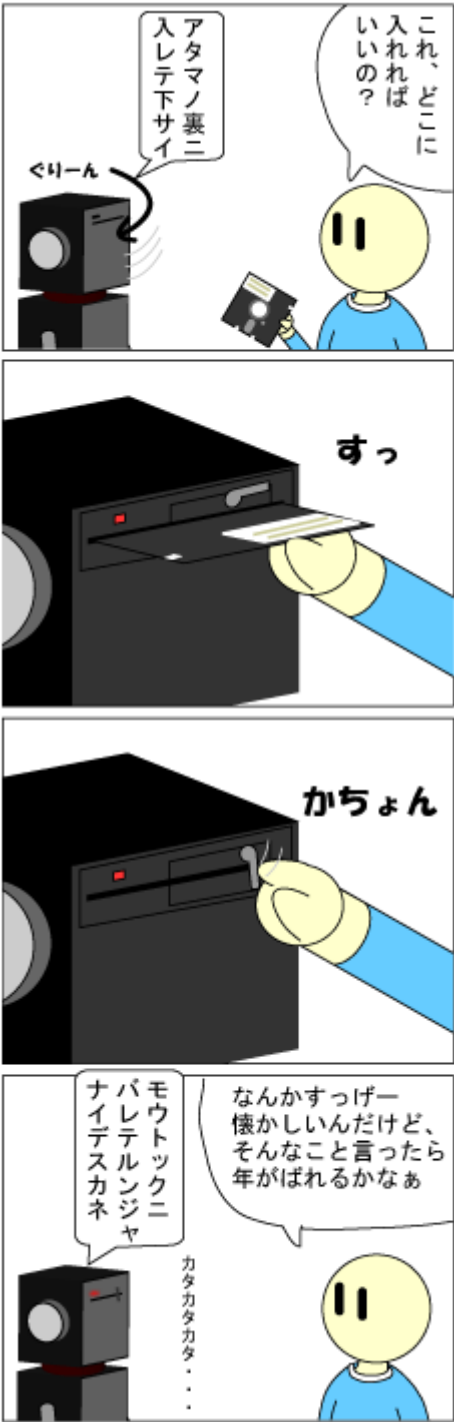
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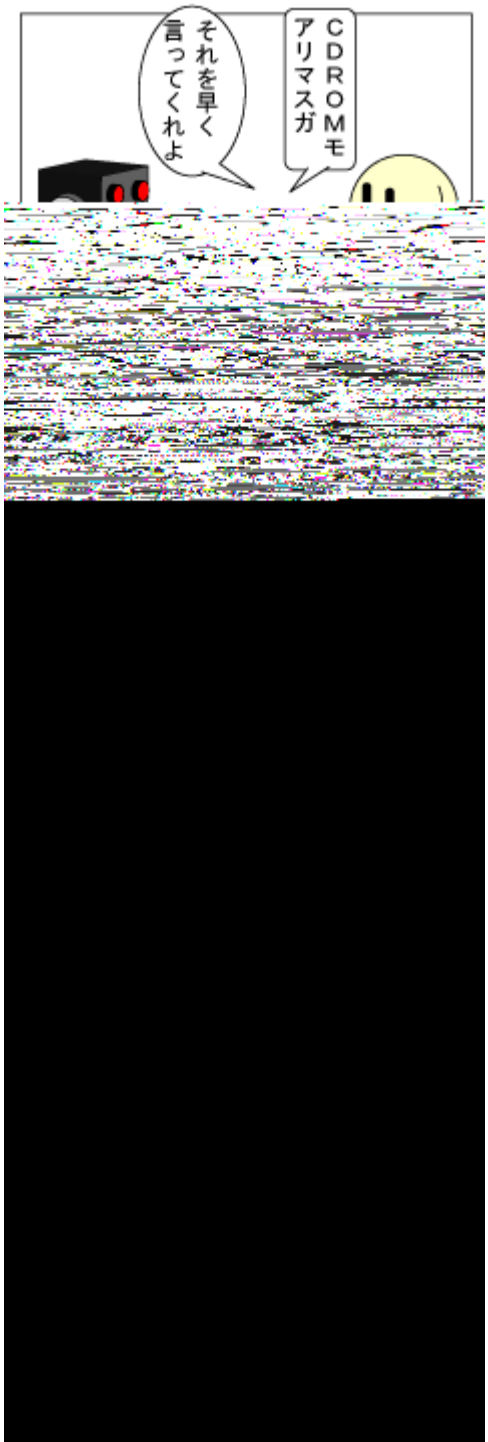
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 use li1e::Spec]
 use li1e::F <eYir]
 use Ter<::Pr <pt]
 use `et pt::ô !g]
 use Ter<::E!c >i!g]

ó™ . :]S ; r Xe>

ur óc !;ig]
 ur ótJitter]
 ur óe!c >i!g]
 ur óst0tus]
 ur ói!put]
 ur ó=0seur1 . Ehttp:PPh <ep0ge: .!i;ty.c <PW0Bu;Pre!eJ01.ht<1E]

<0i!()]

```
su= <0i! \
  setupZe!c >i!g()]
  setupZc !; ig()]
  setupZc1ie!t()]
```

```
<y ^<eth >s . (
  up>0te .- V¶up>0te?
)]
```

```
<y ó<eth >]
```

```
S !1y ! Xe>
Jhi1e(L-)\
  i; (i!>e)(óZ? EV):AE) - , :) \
    10st]
  ^
  ch <p]
  ói!put . óZ]
  ^
```

```
SS tJitter <eth >s Jith >>1
i;(ó!put .õ P[(.*š): (.*)óP)\
  i;(ó: eĚ /up>0te/)\
    ó<eth > . /up>0te/]
    óst0tus . >ec >e(óe!c >i!g? ó2)]
  ^
```

```
SS re0> 0 title 0!> 0 ur1 i! 0! 0rtic1e ; re!eJ01.ht<1
^e1si;(ó!put .õ P[L>iT .*š(VQ.*šVR).*šLA NAGE.E(. *š)E-(.*š)LVPA-LVP>iT-óP)\
  ó<eth > . /up>0te/]
  óst0tus . >ec >e(óe!c >i!g? ó: . óA . E ó\=0seur1^SE . ó2)]
SS re0> >irectly te)t >0t0 ! Xe>
^e1si;(ó!put .õ P[.*óP)\
  ó<eth > . /up>0te/]
  óst0tus . >ec >e(óe!c >i!g? ói!put)]
^e1se\
  pri!t EN >0t0HHHV!E]
  e)it]
  ^
```

```
ó<eth >s\ó<eth >^, -()]
```

^

```
su= setupZe!c >i!g \
  óe!c >i!g . Ter<.:E!c >i!g::getZe!c >i!g()]
  óe!c >i!g TMTM. Eut;8E]
  pri!t EE!c >i!g: E? óe!c >i!g? EV!E]
```

^

```

su= setupZc !; ig \
  <y óp0th . li1e::Spec, -c0t; i1e(li1e::F <eYir, -<yZh <e? E.tJitterE)]
  óc !; ig . eT01 \ °AGô::ô 0>li1e(óp0th) ^ °MM \^]

  <y óch0!ge>]
  Jhi1e (Hóc !; ig, -\user!0<e^ °MM Hóc !; ig, -\p0ssJ r>^ ) \
    óc !; ig, -\user!0<e^ . pr <pt(/)? /user!0<e: /? //? //)]
    óc !; ig, -\p0ssJ r>^ . pr <pt(/p/? /p0ssJ r>: /? //? //)]
    óch0!ge>**]
  ^

  s0TeZc !; ig(óp0th? óc !; ig) i; óch0!ge>]
  ^

su= s0TeZc !; ig \
  <y (óp0th? óc !; ig ) .öZ]
  °AGô::Yu<pli1e(óp0th? óc !; ig)]
  ch< > 0C00? óp0th]
  ^

su= setupZc1ie!t \
  ótJitter . Net::TJitter, -!eJ(
    user!0<e . - óc !; ig, -\user!0<e^?
    p0ssJ r> . - óc !; ig, -\p0ssJ r>^?
  )]
  ^

S STAT»S GETF•YS
su= up>0te \
  eT01 \ <y óresp !se . ótJitter, -up>0te(óst0tus) ^]
  i; ( óö ) \
  J0r! Eup>0te ;0i1e> =ec0use: ööV!E]
  ^
  pri!tZup>0teZst0tus()]
  ^

S pri!t
su= pri!tZup>0teZst0tus \
  i; (óA0`ñQ:R)\
  pri!t; ESet st0tus: 'sV!E? óA0`ñQ:R]
  ^e1se\
  pri!t; ESet st0tus: 'sV!E? e!c >e(óe!c >i!g? óst0tus)]
  ^
  ^

ZZENYZZ

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      , 1      Y      Tjitter      A      ŽŒ      öý      Ó      ¨
İ      I      A      , 1      n÷      ¨İ      öý      í      à í      O

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SHPPer12.8P=i!Pper1.e)e
S Title . Be>2tJitter
S P0r0 .L t<p.1 g
S 9!put . t<p.1 g
S •utput . t<p.1 g

```

```

      K      N      Ter<::E!c >i!g      e!c >i!g
ŽŒ      ĺi!> Js      cp9A2 8      í      à í

```

```

su= setupZe!c >i!g \
    óe!c >i!g . Ter<::E!c >i!g::getZe!c >i!g()]
    óe!c >i!g TM. Eut;8E]
    pri!t EE!c >i!g: E? óe!c >i!g? EV!E]
^

```

```

      p      N      K      Tjitter      n      o      (user!0<e) B
ø      à (p0ssJ r>)      Ê      (Ter<::pr <pt)      A      °AGô—h      G
n      o      N      A      (ĺi!> Js      ê      F•GE ¶      : li1e::F <eYir)      .tJitte
r      G      (li1e::Spec)      ĺ      (°AGô::Yu<per)      |      A
      (°AGô::ô 0>li1e) Net::Tjitter      y      p      N      W
      K      p      N      W      d      <oi!      N
      qĺ      I

```

```

su= setupZc !; ig \
    <y óp0th . li1e::Spec, -c0t; i1e(li1e::F <eYir, -<yZh <e? E.tJitterE)]
    óc !; ig . eT01 \ °AGô::ô 0>li1e(óp0th) ^ TM \^]

```

```

    <y óch0!ge>]
    Jhi1e (Hóc !; ig, -\user!0<e^ TM Hóc !; ig, -\p0ssJ r>^ ) \
        óc !; ig, -\user!0<e^ . pr <pt(/)? /user!0<e: /? //? //)]
        óc !; ig, -\p0ssJ r>^ . pr <pt(/p/? /p0ssJ r>: /? //? //)]
        óch0!ge>**]
^

```

```

    s0TeZc !; ig(óp0th? óc !; ig) i; óch0!ge>]
^

```

```

su= s0TeZc !; ig \
    <y (óp0th? óc !; ig ) .öZ]

```

```
°AGö::Yu<pl i1e(óp0th? óc !; ig)]
ch< > 0C00? óp0th]
```

^

```
su= setupZc1ie!t \
  ótJitter . Net::TJitter,-!eJ(
    user!0<e .- óc !; ig,-\user!0<e^?
    p0ssJ r> .- óc !; ig,-\p0ssJ r>^?
  )]
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S !1y ! Xe>
Jhi1e(L-)\
  i; (i!>e)(óZ? EV):AE) - ,:) \
  10st]
^
ch <p]
ói!put . óZ]
```

^

```
SS re0> 0 title 0!> 0 ur1 i! 0! 0rtic1e ; re!eJ01.ht<1
^e1si;(ói!put .ō P[L>iT .*š(VQ.*šVR).*šLA NAGE.E(. *š)E-(.*š)LVPA-LVP>iT-óP)\
  ó<eth > . /up>0te/]
  óst0tus . >ec >e(óe!c >i!g? ó: . óA . E ó\=0seur1^SE . ó2)]
SS re0> >irectly te)t >0t0 ! Xe>
^e1si;(ói!put .ō P[.*óP)\
  ó<eth > . /up>0te/]
  óst0tus . >ec >e(óe!c >i!g? ói!put)]
^e1se\
  pri!t EN >0t0HHHV!E]
  e)it]
```

^

A.2 userZti<e1i!e i st0tusny z { ' ÷ v

```
Net::TJitter          LCAà ^ £          t      ë      — A      ŽŒ
      O              ù      ÆÇ      ù      ä      Ú
TJitter userZti<e1i!e ŽŒ      '      Ê      Í µ
QtJe< .p1R
```

```
SHPPer12.8P=i!Pper1.e)e
S Title . tJe<
S P0r0 . ,h
S •utput
```

```
use ô¿P::Si<p1e]
use FTGô::E!tities]
use E!c >e]
use Y0te::P0rse]
use Y0te::l r<0t]
```

```
<y ó pt . shi;t(öA0`ñ)]      S get pti !s
<y óscree!Z!0<e . /jscripiter/]S pti !: setup 0 scree!Z!0<e
<y ó pth . 0]      S pti !: 0>> hyper1i!W t0gs
<y óc u!t . 20]      S pti !: 0 !u<=er ; TieJi!g st0tuses
```

```
i;(ó pt . õ P,s(Q[,R*)Pi)\
      óscree!Z!0<e . ó:]
^
i;(ó pt . õ P,hPi)\
      ó pth . :]
^
i;(ó pt . õ P,c(V>\: ?A^ )Pi)\
      óc u!t . ó:]
^
```

```
<y óuserZst0tuses . get(Ehttp:PPtJitter.c <Pst0tusesPuserZti<e1i!e.)<1E .
      Ešscree!Z!0<e.óscree!Z!0<e¶c u!t.óc u!tE)]
```

```
<y öst0tuses . (
      óuserZst0tuses . õ PLst0tus-.Kš
      Lcre0te>Z0t-(.Kš)LVPcre0te>Z0t-.Kš
      Lte)t-(.Kš)LVPte)t-.*šLVPst0tus-Psgi)
)]
```

```
; re0ch (öst0tuses)\
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LCAà ŽŒ Øp Ć ï z

Lst0tus-

Lcre0te>Z0t-¿e> Aug :9 :@:A0:2D *0000 2009LPcre0te>Z0t-

Li>-A@028A2828LPi>-

Lte)t-Q[S2: A: 2][S228: 2][S2: A: 2][S208D@]R[S2CAC0][S29289][S: 2A98][S2: @8D][SAA02:][S2@C: 2]

http:PP=it.1yP1f;@eLPte)t-

Ls urce-¶[t]0 hre;.Ehttp:PPse0rch.cp0! . rgP>istPNet,TJitterPE re1.E! ; 11 JE¶[gt]Per1

Net::TJitter¶[t]P0¶[gt]LPs urce-

Ltru!c0te>-;01seLPtru!c0te>-

Li!Zrep1yZt Zst0tusZi>-LPi!Zrep1yZt Zst0tusZi>-

Li!Zrep1yZt ZuserZi>-LPi!Zrep1yZt ZuserZi>-

L;0T rite>-;01seLP;0T rite>-

Li!Zrep1yZt Zscree!Z!0<e-LPi!Zrep1yZt Zscree!Z!0<e-

Luser-

Li>-C: C2: D2LPi>-

L!0<e-j0BBy scripiterLP!0<e-

Lscree!Z!0<e-jscripiterLPscree!Z!0<e-

L1 c0ti !-LP1 c0ti !-

L>escripti !-LP>escripti !-

Lpr ;i1eZi<0geZur1-http:PP0: .tJi<g.c <Ppr ;i1eZi<0gesPAC02CC00@Phir shi<0Z! ightZ2009,

0:Zcr pZ! r<01.jpgLPpr ;i1eZi<0geZur1-

Lur1-LPur1-

Lpr tecte>-;01seLPpr tecte>-

L; 11 JersZc u!t-CLP; 11 JersZc u!t-

Lpr ;i1eZ=0cWgr u!>Zc 1 r-D09A9DLPpr ;i1eZ=0cWgr u!>Zc 1 r-

Lpr ;i1eZte)tZc 1 r-AAAAAALPpr ;i1eZte)tZc 1 r-

Lpr ;i1eZ1i!WZc 1 r-11AA00LPpr ;i1eZ1i!WZc 1 r-

Lpr ;i1eZsi>e=0rZ;i11Zc 1 r-A0U2UDLPpr ;i1eZsi>e=0rZ;i11Zc 1 r-

Lpr ;i1eZsi>e=0rZ= r>erZc 1 r-8CA@ACLPPpr ;i1eZsi>e=0rZ= r>erZc 1 r-

L;rie!>sZc u!t-@LP;rie!>sZc u!t-

Lcre0te>Z0t-S0t G0y :9 :2:AD:AD *0000 200DLPcre0te>Z0t-

L;0T uritesZc u!t-0LP;0T uritesZc u!t-

Lutcz ;;set-A2@00LPutcz ;;set-

Lti<eZB !e-T Wy LPTi<eZB !e-

Lpr ;i1eZ=0cWgr u!>Zi<0geZur1-http:PPs.tJi<g.c <POP: 22020A20DPi<0gesPthe<esPthe<eCP=g.gi;LPp

r ;i1eZ=0cWgr u!>Zi<0geZur1-

Lpr ;i1eZ=0cWgr u!>Zti1e-;01seLPpr ;i1eZ=0cWgr u!>Zti1e-

Lst0tusesZc u!t-@0LPst0tusesZc u!t-

L! ti;ic0ti !s-LP! ti;ic0ti !s-

LTeri;ie>-;01seLPTeri;ie>-

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te)t »! ic >e M A ^ < ^ (E! tity) B à í
o Î ^ < ^ A à ÆÇ

Lst0tus-
Lcre0te>Z0t-¿e> Aug :9 :@:A0:2D *0000 2009LPcre0te>Z0t-
Li>-A@028A2828LPi>-
Lte)t-Q[S2: A: 2][S228: 2][S2: A: 2][S208D@]R[S2CAC0][S29289][S: 2A98][S2: @8D][SAA02:][S2@C: 2]
http:PP=i t.1yP1f;@eLPte)t-
.....

LPst0tus-

st0tus cre0te>Z0t te)t ¶ ŽŒ B AN Wd
getL CA à øGò G < ŽŒ « ü M G
] ŽŒ s « . AN
à < : f AN
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AN ä Ðý Ž ꝥp a te)t ¶
FTGò::Eltities A à
4 ™ Ä) TU
œž g B " •
AN " • Ê cre0te>Z0t te)t ä Ð AN
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AN Ê ã ...x B] ý - TU

<y öst0tuses . (
óuserZst0tuses .õ PLst0tus-.Kš
Lcre0te>Z0t-(.Kš)LVPcre0te>Z0t-.Kš
Lte)t-(.Kš)LVPte)t-.*šLVPst0tus-Psgi)
)]

B AN A ŽŒ Jhi1e
,

QtJe< 2.p1R

SHPPer12.8P=i!Pper1.e)e
S Tit1e . tJe< 2

S P0r0 . ,h,r
S •utput

use ô¿P::Si<p1e]
use FTGô::E!tities]
use E!c >e]
use Y0te::P0rse]
use Y0te::l r<0t]

<y ó pt . shi;t(öA0`ñ)] S get pti !s

<y óscreelZ!0<e . /jscripiter/]S ,s0screelZ!0<eR pti !: setup 0 screelZ!0<e
<y ó pth . 0] S ,h pti !: 0>> hyper1i!W t0gs
<y óc ult . 20] S ,cQ!u<=erR pti !: 0 !u<=er ; TieJi!g st0tuses
<y óreT . 0] S ,r pti !: reTerse st0tuses Jith ti<e, r>er

i;(ó pt . õ P,s(Q[,R*)Pi)\
óscree!Z!0<e . ó:]S set 0 screel !0<e: screelZ!0<e 0;ter ,s
^

i;(ó pt . õ P,hPi)\
ó pth . :]S utput hyper1i!Ws ; ur1s: :
^

i;(ó pt . õ P,c(V>\: ?A^)Pi)\
óc ult . ó:]S set 0 c ult: si!g1e >igit t triple >igits 0;ter ,c
^

i;(ó pt . õ P,rPi)\
óreT . :]S reTerse < >e: :
^

<y óuserZst0tuses . get(Ehttp:PPtJitter.c <Pst0tusesPuserZti<e1i!e.)<1E .
EšscreelZ!0<e.óscree!Z!0<e[c ult.óc ultE)]

<y 1st0tuses . ()]
Jhi1e(
óuserZst0tuses . õ PLst0tus-.Kš
Lcre0te>Z0t-(.Kš)LVPcre0te>Z0t-.Kš
Lte)t-(.Kš)LVPte)t-.*š
LVPst0tus-Psgi)
)\

<y ö1t . 1 c01ti<e(str2ti<e(ó:))]
<y óti<estr . str;ti<e(E1c 1BE? ö1t)]
óst0tuses\óti<estr^ . ó2]
^

i;(óreT)\
ös rte>ZWeys . reTerse s rt Weys 1st0tuses]
^else\
ös rte>ZWeys . s rt Weys 1st0tuses]
^

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; re0ch <y ócre0te>Z0t (ös rte>ZWeys)\
pri!t Eó\cre0te>Z0t^: E]
S ,h pti !
i;(ó pth)\
    óst0tuses\ócre0te>Z0t^ . õ
    sP(http:VPVPQ[VsR*)VsKóPLO hre; . Eó: E-ó: LVP0-Pg]
^
<y óst0tus . e!c >e(/cp9A2/? >ec >eZe!tities(óst0tuses\ócre0te>Z0t^))]
pri!t Eóst0tusV!E]
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      B      AN  A      ŽÆ      Y      Jhi1e  • •      B
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(cre0te>Z0t) ¶ M      Đý      O      ¾Î      ¾Î      G      M
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      ,r      ^
à      (reTerse)      Ñà ¶ M      • Ñà M C (s rt) k ä Ó ¨ d Ñ
      • Ñà ¶ Ž      k ä C      ¶ Ž

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<y 1st0tuses . ()]
Jhi1e(
    óuserZst0tuses . õ PLst0tus-.Kš
    Lcre0te>Z0t-(.Kš)LVPcre0te>Z0t-.Kš
    Lte)t-(.Kš)LVPte)t-.*š
    LVPst0tus-Psgi)
)\
<y ö1t . 1 c01ti<e(str2ti<e(ó:))]
<y óti<estr . str;ti<e(E1c 1BE? ö1t)]
óst0tuses\óti<estr^ . ó2]
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```

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i;(óreT)\
    ös rte>ZWeys . reTerse s rt Weys 1st0tuses]
^e1se\
    ös rte>ZWeys . s rt Weys 1st0tuses]
^
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(: 2009 8 22)

