

## **s l gr Lk mb c j q Zl b r f c mp g c q**

O v xxt – stl 5b rx 5 vp xpx plx t p s pzt wlst t xt – t

O – – xpx p s r llpq px – stl 5T t t 4Y l x ts x p p s f f f 7

### **3.1 a me l gr g t c k mb c j q**

O v xxt – stl t t t t ux t pr x t t – 7

T x pr w x pl – stl t t t p t = p z p s v pl r t 7

Xx v x x – stl t t t w t t – v p – p 7

]w x pl p s st xt – stl t t t w – p – z x l 7

O v xxt pr w x tr t st l x pl u w t r v xxt – stl 7

#### **3.1.1 e m Z j Zl b r Z q i f g c p Z p a f g c q**

c pr w t w x v pl t s x x t x x t t pl qv pl 4 p vp w x v w t spp vt w t 4  
s rx v w t p q l t p s w x v p – 4 p s x x v w t st r x x t – p t x p l 7 O rt p x v  
w t spp vp w x v 4 t str x t l x w x x u w t qv pl F u x s w t p – t u pl l  
x s r TOU t q z p s w t tpr w w t q z pl t s p p q p t u w t t q z 7  
b x – x p l 4 tpr w u w t w t qv pl x s x x t s x u w t qv pl 4 x – t l t t l u  
st p l x u s p w x w t str x t 7 f t w t s x w p w t pr w u v pl p s  
qv pl 7

f t r p v str – x v p z x t vt s w x s x x s pl w p s p s t t  
– t – t u w t t 4 t r p p p – t p q pr lt t l 7 f w t t s t p K U p  
x – x p p 4 t r p p p pl t p s x u t t x x w t w t pr w u v pl 7 M w t  
t t – t t r l s t t s p pl x lp vt p s lp vt v pl F = l x w w q = x p qv pl u  
= q x l t p = p s v pl r w p = w p t – s x t = 4 = u t s = p s = p p l x t = 7  
c w t t x p t x t u v p l p x 4 p s q w u w t – t w s st r x t s q t l l t p t  
w x – t t t x w t w p s u w t st x v t 7 P x u t t st x v x t st – p s s x u t t  
lt t l u p pl x 7 T t t 4 q w – t w s t p t p p t l p x t l l lt t l G t x w t l s  
p t – p x w r w p p q pr v pl p = s r t p t = w x w x l x l t t p l  
r t p x x p s s x u w l q l t – l x v 7 U t p s w t r u x t w t – t l t – t x t  
l t p t s q t w p x 7 c w x – p q pr p z x t u t s p w t x p z 7 c w t x p z s t  
t x t p q l t – 5 l x v z x l w t p u w t t 4 w v w x u t t l st – p s x t  
w x x p t s q l t – 5 l x v z x l w t p u w t st x v t st t – x t w t – 7 f w p s  
t s w t w t t p t t t p l p u l x v p q l t – 4 x u w t l x qv pl

x t pr Kd t x l ut wp t - t wp t p prw t t p v pl p s wt t - qt - t  
p u t t t x v w wt t ltr qt t t r - t x v l x 7

**e mk q**

cwt S[ Yb - stl uOp s4Y p p s Zt t l l x p pr - u S pl 4[ t p 4Yt w s  
p s btltr x

**e** cwt t p t wt t = v pl 4st r x x v wp wt t p prw t t 7S[ Yb wt v pl  
p t pzt t t t p = - t - x = u wt t 4u - w w w t r p t pl p t wp  
w l s q t s t p s w w w t - p t w l s p t r r 7

**m** cwt t p t wt l t l t l t l u p pl x 7cwt p t wt q p x pr x wp wt t  
- t u - x st t wt t - 7cwt - p p u t r wt t - Ou t p - l t 4 t wt  
= g = z t l l wt t = - t pl p t Ou t p - l t 4 t p s wt s x pl v q 17cwt t x x l p  
st v t t u u t x l x p q wt v p l p x u t p G t - p pzt wt r - - p s l t t l  
= x t wt b Q X Q O c r - - p s = qt - t x - x x t F = - t - t - t q p 4 t r t t  
- t q 7

**k** cwt t p t x p l l t t p l p x w w w p v pl r p qt l x x q v pl 7R  
x p r t 4 x p r t p x x s - p p v t p r t l t l t r t s x s r p q t r l t s p x  
t x w t q t l t r x v wt = O X [ b Q = x u - p 5 - t 4 q w x x v wt = X C = u r x  
z t 7 U S [ Y b w t t v pl str - x x p t t u t s p - t w s 4 t w p t wt  
O X [ b Q 5 Y Q c T [ P p s w t X C 5 Y Q c T [ P F

S [ M X F U O [ Z U Q 5 f U Z P [ f

7 j t l t r S [ M X F d b Q 5 O X [ b Q 5 Y Q c T [ P

77 Y [ e Q 5 Y [ d b Q 5 c [ 5 f U Z P [ f 5 T Q M P Q a

77 [ [ ] 5 d [ ] 5 Y Q Z d

77 O X U O W 5 [ e Q a 5 O X [ b Q 5 [ ] c U Z

S [ M X F d b Q 5 X C 5 Y Q c T [ P

77 [ a Q b b 5 X C 5 W Q h l

cwt s p t t s x s x p t wt w t p r w w p l l t t l u v pl 7 b t l t r x R - wt p q t x t  
t t t wt t u wt s t l t r wt t w t r w x t u - t w s p x t 7 S [ Y b s t l t p t  
w w p p p s - r w x t 4 q p t - t s x w w w - t w s x l q t t s 7 c w x x p l l  
s t t s q w wt p x l p t p s wt p t u wt t - p s s t p x p q wt v pl 7  
a l t < F d t wt O X [ b Q 5 Y Q c T [ P l t p wt l t p l x 7

a l t = F U w t p l x p x x = q l r z = t wt X C 5 Y Q c T [ P 7

cwt v pl w t p r w t s t r x q t s x p S [ Y b p pl x p t pl - w l l q t l wt l t t l u wt

x p z stux ts tp lxt 7M xpl S[ Yb p pl x ls wt tu tr x up x vlt wwxw5  
lt tl v pl4 wwx wt str - ts x p t t rt u x p z 4pll u wwxrp qt u wt  
str - ts s wt lt tl uqp x t p F

S[ MXFQP U5Y MZdbOa Uj c

S[ MXFQP U5d ZU5c MbW t tp x - t x p z cwt v pl str - xx qt tt  
wt t pll p z p s wt x p z ls x l t st pxts st p sx v u wt t =  
qlt-5 l x v p tvxt p s u wt p l x p x s - px 7

a

O v xx t r - lt x tut wt -qt u-t pl r t p x s x s pl t 4 w  
pq pr wt p t p s w wt x t pr wp t w x s x r t -t p x s x s pl s x t t rt  
p x p q l t l x z t s x w p x s t p v t ur -- x p x z x l p s p r x p t s p q l x x 7

Usx s pl x w w w r v x x t r - lt x wp t wt rp prx p pl t p x p x s x r t  
p x r x t t l t - t p s t l t r t r x p s x l t t l p x w x p - v wt  
t l t - t 7 c w t x s x s pl w x z x p - l x x - t x pl p 7 c w t p - x u wt  
r - lt x wt x wp wt - t p t t r p q t s x t t x p t s p s p r x s t t s x  
t l t l p x w x 4 wt - t w x x p t s wt t t p s r r t u l wt l x 7 f wt t p  
lt r - lt x s x s pl r p q t p x t s st p s p r - l x p t s t u s t p x t s  
s x t t x p x u p t r x r t 4 w w w r - lt x s x s pl p t w w w u t x l t x  
r t p x v s x x r x x t x p x 7

Usx s pl x w w w r v x x t r - lt x p t t t x u - p x 4 p p r t s wt  
x s x s pl u w w w r - lt x 4 w w w u t x l x 4 r x p l l x u t x l 4 q l t - l t 4  
p t v x l p t 4 w w w r t p x t 4 t u t r x t r -- x p p s v t t p l l v s l t p s t 7

n

c w t u - p x u p v pl w x p r w x l p v t l p w r t r w x t p s p t t p l  
x z u q t x v s t u x t s q w r - t s x p l v p w t w p wt t 7[ t p t r x u w x x  
s r t p v pl r t q p t s t 5 x x v - p pl r t s t p s w q p x p p pl  
w x p r w 7 S[ Y b s t u x t x s - p x q t w p u t t t 4 p s w w t v pl r t w p  
p t x - p p t w t w w t s t t l u w x t u w t t - 7 c w t r r t p l  
u p - t z u v pl w x p r w x p s t v pl p r z r p q t t s t t x t u p r t x t 4  
s x t r l p s s t t s q w t p x p q t 7 R x p r t 4 t r p t w x t p - x t x  
- t s t p x w r l t q l t - x w t p l p - p t s t l l t - p r w x t M c Y 1 - t x t s x  
w t P t x R r q c w t t p l M c Y v p t w t r - t w t - t q t u t t x v w x  
r p s 7 d u p t l 4 w x l t s - p r - t l t p x v w x r p s q t w x s 7 c w x p s t x t

5 r t t - t p v t t l l x v w t - p x 7 c w x x t u t t s p p q l t - u r l t 7 c w t  
t = x r x p l v p l x v t - t G w t w p v p l x p x u t s 4 w t t s t r - l t t  
r l t w t p x q p z w x w x l t - p x t F

S [ M X F S Q c 5 Y [ Z Q h

7 S [ M X F d b Q 5 M c Y

7 7 U Z b Q a c 5 O M a P

7 7 Q Z c Q a 5 J U Z

7 7 Q Z c Q a 5 M Y [ d Z c

7 7 O [ X X Q O c 5 Y [ Z Q h

H H t v p l p x u t s v p l p r z t s J J

7 7 O [ X X Q O c 5 O M a P q v p l t p - x t s

### 3.1.2 j g l e s g q r g a k m b c j q

c w t t = x t p r x x w p r - t x u t x t s x t - u p l p v p v t 4 x x  
x x v w p t t p l - s t l x v u - p l x - w p t s t t l t s r t t t s p s w x  
r r t 7 N Z R v p - - p p t u t t l t s t r x u s x p l v 7  
c w t - s t l w t 4 p l w v w x - x p x u - s x p l v s t x v p x 4 w p t q t t t s  
x w w t x t x u s t p s x v w t t = q t w p x p s p p l x v w t r v x x t s x u w l  
u w t x t u p r t 7

‘ l d

a t t t p x t u w t l x v x x p p r w x a t x t = t u N p r z Z p R - 0 N Z R l l t  
s t r x q t w t s x p l v v p - - p 7 c w x x w t s x p l v p p t l p r x l t t l 4 x x v  
w t t - p x u w t l p v p v t 7 N Z R w p q t t t s x t l t r x u w t p u r - t  
v p - - x v l p v p v t 4 p s - p t - s x p l v r p q t s t r x q t s t p x x v N Z R l t 7  
R t p - l t 4 x - p v x t p v p w x t - w p w p p l x t 5 p x v u r x 7 c t l t r w t  
u r x w t t - t l t r w t = l x t = - t x 7 c w t l x t 5 p x v u r x p l l w t  
t s p p l l x t 4 w p x p t t r t u l x t p r q t t t x 7 c w t t t l t r w t  
x q r l x z x v w t - t q x w t s p x v p t p 7 c w t t s q l t r l x z x s x p t

```
draw-line      ::= select-line + choose-points
                  + last-point
select-line    ::= position-mouse + CLICK-MOUSE
choose-points  ::= choose-one
                  | choose-one + choose-points
choose-one     ::= position-mouse + CLICK-MOUSE
last-point     ::= position-mouse + DOUBLE-CLICK-MOUSE
position-mouse ::= empty | MOVE-MOUSE + position-mouse
```

w t l p x u w t l l x t 7

cwt px- x wt st r x x p t u t F 5t-xpl 4 w x l t r p t 4 p s  
t-xpl 4 w x t r p t 7 c t-xpl t t t wt l t lt t l u t q t w p x 4 r w p  
t x v p z t 4 r l x z x v p- t q - x v wt - t 7 Z 5t-xpl p t w w wt 5t t l  
p q p r x 7 c wt 5t-xpl p t s t u x t s x t- u wt 5t-xpl p s t-xpl q p  
s t u x x x u wt u - p-t H t t x c wt = H = - q l x t p s p = x s t u x t s p = 7[ l  
5t-xpl -p p t p wt l t u u p s t u x x x 7 c wt x w 5 w p s x s t x q x l x v  
t p = 3 = 0 t t r t l p s = = 0 r w x t l 7 R t p- l t 4 wt u x l t p w p wt 5  
t-xpl s p 5 x t x s t u x t s q t t l t r 5 x t u l l t s q r w t 5 x u l l t s q  
l p x 7 M l u wt t p t 5t-xpl 4 w p x wt s t l l w p wt q p x t p r x  
p t 7 c wt t r s l t p w p t l t r 5 x t x s t u x t s q t x x - t 0 x t s t s q t t  
wt = l x t = - t t l u l l t s q O X I W 5 Y [ d b Q 7 c w x x u x t-xpl p s t t t  
wt p r p l r l x z x v u p- t 7

] x x 5- t x 4 t l z p wt l p l t 7 c w x t l l w p wt t p t x q l x x u  
x x 5- t 0 t p p t s q wt = = - q l 7 [ t x x w p x x 5- t x t- p  
t r x p l - q l t t t x v p r x 7 c w p x 4 t x x - t wt - t p p l 7 c wt  
wt x x s p Y [ e Q 5 Y [ d b Q p r x u l l t s q x x 5- t 7 c w x l t x  
t r x t 4 p s w x t r s x x 5- t - p x t l u t x w t q t t- q t p Y [ e Q 5 Y [ d b Q  
p r x u l l t s q x x 5- t 4 p s 7 c w p x 4 x x 5- t - p q t p - q t u  
Y [ e Q 5 Y [ d b Q p r x w p t t 7 b x- x p l 4 r w t 5 x x s t u x t s t r x t l 4 q w x  
x-t x s t w p t wt x u q t x v t- 7 U - p q t t - t u wt 5t-xpl  
r w t 5 t w w w x x t l u s t u x t s q t 0 x t t l t r 5 x t l x x 5- t u l l t s q  
O X I W 5 Y [ d b Q 7

cwt N Z R s t r x x u p x t u p r t r p q t p p l t s x p x p 7 [ t - t p t x  
r wt - q t u l t 7 c wt - t l t p x t u p r t t x t t x 4 wt - t  
r - l x p t s x x 7 c w x - t p t x p w t t x x t wt t p r p wt x t u p r t x s t r x q t s 7  
R t p- l t 4 t r l s w p t t l p r t s wt l t u r w t x p s r w t 5 t x w wt  
x v l t s t u x x x r w t 5 x H x x 5- t 3 O X I W 5 Y [ d b Q x x 5- t 3  
O X I W 5 Y [ d b Q 3 r w t 5 x 7

r

Y t p t q p t s N Z R w p t q t t r x x x t s p = r v x x t = t v w 7 c wt x v t wt  
p s p p v t u r x t r q w x wt l p v p v t = r t p s x x t u r - - p s p-t  
p s l t t 7 c p z p r x v p- - p 0 c M S l

### 3.1.3 r f c a f Zj j c l e c m d b g q n j Z w E Z q c b q w q r c k q

w t p r w r p l p s v p - - p 5 q p t s t r w x t t t x x p l l s t t l t s w t - x t p r x t  
t - t t r - - p s l x t 4 p - 4 z t q p s p s r q p t s 7 c w t t p t x w x p  
x 4 w t t u t 4 p q w t l l w t t p p r w t r p v t t p l x t s t p l x w - t  
- s t x s t s p s - t 5 x t x t u p r t 7 ] t x v p r z t x p t p p q l t  
l t t - t 4 q - x v p - t t x t l x l t t x l t 7 U p s s x x 4 x t 5 q p t s s x p l v p t  
- t s x l p x t s 7 O l x z x v p r p p p x l p x w t r t t w p p - t p x v  
s t t s t w t r t r t t r t 7 c w x q l t - r p q t p x p l l t l t s q  
t v p s x v t p x r w p = t l t r t v x u t = = r l x z x q = p w t t - x p l  
u w t v p - - p 7 U i w x p p r w x p z t 4 w t s t p x t s - t - t - t p s p x v u  
- t t t x w t r t u s x l p x u - p x 0 - t 4 t r 7 l p t p q p r t s p p 7 S p l  
w t p r w - t w s w p t s x u t t q l t - 4 p - t s x l p 5 x t s t - t r p v t l t  
r t s - t w s u v p l p r w t t - t 7 U t p s u w p x v t l l 5 t u x t s l p 4 w t t x  
t t p t u - x v p - t t l p p z 4 t r v x x v u x u l s x t r x p s q p r z x v  
u w t 7 c x p l l 4 t t w t w x t l p l t x t s p t l t t l 4

f a U Q n X Q c c Q a

7 R U Z P n b U Y U X M a n X Q c c Q a

7 O [ ] h n U

7 Q P U n O [ ] h

### 3.1.4 n f w q g a Z j Z l b b c t g a c

k m b c j q i E

c w t w - p - t - x t l l s t s 7 W X Y O w t z t 5 x t t l Y s t l l t  
w x s t p s x v p p q p x u s t p x t s t s x x p q t t u - p r t 7 U x p x - t s p  
x p z x w x x t p r x w t t t r x u x - l t r - - p s t t r t 4 x p l l p z x v  
- t w p = ; t r s 7 Q p - l t u w x l s q t x v p t p r w p s t l p r t u p t 4  
r w p v x v w t u u p s 7 U s t t t s r - l t p r x r w p s r x v p  
s x p v p - 7 c w t p - x x w p w t t - t r - l t p z l s q t l x x q p z Q p x  
S [ Y b l q t u t w t t p t - - p w t - x w x p l p r x 7

r S

M r x x x u w t p z 4 w t w t t q x s p - t p l t t t p x u w t p z G

Q t r x u w t p z x v w t t - = u p r x x x 7

P x v w t p r x x x w p t 4 w t t x l w p t s t r x t s w p r r - l x w w t p z  
x v w t x - x x t u w t t - 4 p s w 4 s x v w t t t r x w p t 4 w t t x w x w x t t l

-t pl pr xx wt t x t u t r x t l t t 7 WXY x t l p t s wt S[ Y b - st l 4 p s r p  
q t w v w u p p t l 5 t t l S[ Y b - st l wt t wt - t w s x v x t 7  
c wt - st l str - t wt t tr x w p t x u x t s u t t w x p l - t p 4 p  
- t pl t p p s p t - t t t p F

W W t z x v 4 p r p l l x x v z t 4 x r l s x v w u p s wt - s u t z t 7

N ] t x v p - t q 7

] ] x x v 4 - x v wt - t 0 x x p s t x t l p p p v t 7

T T - x v 4 x r w x v wt w p s q t t t - t p s z t q p s 7

P P p x v l x t x v wt - t 7

Y Y t p l l t p x v u p w x p l p r x 7

a b t - t t w x w - p q t x v t s u t t s t w p t p x u x 4 p

x r x v 7

c wt t tr x u p p z x l x l t x t l t p t s r r t r t u wt p x t p 7 R  
x p r t 4 x p v x t t p t x v p - t 5 q p t s t s x 7 U t x t p x v l t r w p r t t t  
x l x p wt t 4 s t l t t wt r w p r t p s t t x 4 p s wt t t x  
x v x 7 c w x x s t r - t s p u l l F

1. Y t w p s - t T j - t l

2. ] x x - t p u t q p s r w p r t ] N j X Q R c l

3. a t z t q p s T j z t q p s l

4. P t l t t r w p r t Y W j P Q X Q c Q l

5. c t r t r x W j r w p l

6. a t x x x t x x T j - t l Y ] N j X Q R c l

### 3.1.5 a m e l g r g t c Z p a f g r c a r s p c q

c wt r r t u p z x v p q l t - p s l x v x q s x x t p s r t x v q v p l  
x r t p l S[ Y b 7 O O c p - t wt s x x r x q t t t l v 5 p s w 5 t - - t - 4  
x w s r x l t q t x v t s x l v 5 t - - t - p s \_ - p r w t s \_ p v p x wt r t  
u w 5 t - 0 z x v l - t - s t t - x t w x w \_ u x t \_ 7 c wt p l t u p x -  
p s - t p l t p x W X Y t t q p t s wt Y s t l T - p ] r t O Y T ] l p r w x t r t  
u O p s 4 Y p p s Z t t l l 7 M wt r - - p - x 4 x x wt s x x r x q t t t  
l x v x x l t t l t - p x 4 p r x p s l t x p l p p p r w x t r p l - s t l u wt t \_  
s t p s x v 7

c wt q l t - p r t - s t l a p x p l q t w p x x r w p r t x t s p q t w p x w p x  
x t s t s p r w x t p t r x w v p l 7 c w x t l t - t u p x p l x x u t t s s x x v x w

qt tt x tllxt p s -prwx t5xt qtwp x 7U wt uxl s up ~~xx~~xpl x tllxt rt 0MU4p  
t- t wxqxx v p x pl qtwp x x tut ts p pz ltsvt5t tl t-7Mz ltsvt5  
lt tl t- r px p pvt qtwp x v x p t x -t 7cwt pvt wp z ltsvt pq  
x t lup s x t x -t 4xrl sx v x v pl 7Urp t u - rt px pr x p s t t  
x u -p x pq x rwp vx v t x -t 7M wt pvt qtwp t x x t x -t 4x  
rwp vt wt t x -t p s x z ltsvt7f t rp x wt t pll qtwp x u wt  
z ltsvt5t tl t- p p t t rt ut x -t p s pvt pt p wt v t x  
x-t7cwt v pl u wt pvt x rwp prt xts p p tut t rt t pll xqlt t t rt u  
pvt :t x -t pt 7cwt tprw rtts q - x v u - t pt p wt xqlt  
pt q -tp u t p x pr x 4 wt l x-pt v pl u wxwx p x t p t u wt  
st xts pt 7cwx t vt t pl - stl ur - p x x ts x wt sxp p z u wt  
v p--t 7[ rt wt wp xst ~~xx~~s p qlt- p s p-tp up x x v p wt l x wt  
qlt- 0wt plv xw- l4 wt v p--t wt t t t wt qlt- p s plv xw- x p  
v p--x v lp v pvt4 wxwrrp qt t tr ts p-prwx t tprw wt st xts pt7cwt  
prwxtr t u wt -prwx t l pll wt stuxxx u wt tprw qlt- prt p s wt  
pr x wp rp rr p t t wp prt7ct -x p x x pl p -ts wp t rt wt  
st xts pt x tprwts7

cwt t r - p x pl - stl x wt qlt- prt - stl4qp ts wt qlt-5  
l x v z uZt tll p s bx- p Op tvx Ytll d x t x 7M qlt- prt r x  
up t u pt p s p t u t p x wp rp qt t u -ts wt pt 7Ntwp x x p  
qlt- prt x p 5 t rt 7Rx 4 wt r t t p x rw t qp ts wt r t  
pt p s wt x x p lxs wt r t pt prwx t wt t pt7cwt qlt- prt  
- t t t p x pl qtwp x 4p s x - rwp prt x t wt v pl u wt pvt 7M qlt-  
prt t t t p v pl q stuxxv wt st xts pt p p q t upll xqlt pt 7[ rt  
wt xxxpl pt x t 4 wt p z xwx wt qlt- prt x ux s p t t rt u t p x  
wp u - p p w xwx wt pt prt u - wt xxxpl pt t u wt st xts pt 4  
wt t rrt u l t -x p x rr 7

f t rp wxw/xw u s~~aut~~ t pr xxx wp rr xwx p qlt- prtFv pl  
u - lp x 4 t p x tltr x 4 t p x p l x p x p s v pl r - lt x 7cwt tlp x wx  
qt tt wt t qlt- prt rt t p s z ltsvt5t tl pr x x x zt 7]t rt x wp  
rr p wt z ltsvt lt tl x t u -ts q wt v pl u - lp x rt 4 wxwr tpt wt  
xxxpl pt qp ts q t p x u wt t t pl t x -t 7Mx p wt z ltsvt  
lt tl pt t p x x wt qlt- prt wxwpt tltr ts p s p lxs7cwt tpl z ltsvt  
pq wt pvt p s x t x -t p s v pl x st xts u - wt pt: t p x u -p x



x wt qlt- prt7Ntrp t u wt v pl u - lpx rt 4 wt t u st xts pt  
 xsxpt wt z ltsvt5t tl v pl xwx wt qlt- prt7cwt t px tltr x rt  
 tltr wt p xpt t px p pvxt x x x-t qtrp t x x stt-ts wt - lxztl  
 p u - wt pt x wt qlt- prt t u wt st xts pt Gwt rt px pl  
 qtwp x x x- lxs7

U t pr xv r v xxt q t- 00b1 xst p- stl u t rt x 4r v xx ps  
 pr x 4q lxzt wt r v xxt prwxtr t 4x x x t sts s rt pst r x x u  
 wt t x t- u t t rt upr x wp wt t u - 70b xst p- t wlx x x  
 u wt t p p x u -px 5 rt x v-prwx7cwt t- wp x x st t-x x v w tp  
 p x lp rts t upr x t t rt qtr -t p wt pt-pst - t p -p x xwx wt  
 t 7

0b p t- x r pt t ppt rw l vxpl psxx xwx t r v xxt  
 prwxtr t7[ wt t wp s x wt prwxtr pl p s vt t pl5 t x u -px 5 rt x v  
 p prw u w 5t - -t- t tprw7[ wt wt wp s x wt r - px pl p s  
 t t t p x pl p prwrwp pr t x x u rw l x v x x t tprwp s MU qlt-5 l x v  
 lxt p t7

cwt prwxtr t u 0b x q x q wt r sxpts prxx u xt -pllt  
 q t- Fux t t x wt pl q t- pt x r pr xw wt w xpl ls p s u pt  
 rt pl4stplx v xw-t pl rt t 7Qprw q t- wp wt p-t vt t x r t7M  
 q t- x st r xts x t- ux ts x p s pl v xwp-t- t u  
 wlsx v ts x u -px 7U wp p u -px u r x u rt x v wt x p s  
 s rx v wt p s t-p t l ts x u -px 7Qprw u wt xt q t- x  
 trxplxts u wp slx v -t p tr ut t pl x t pl rt x v7R t p- lt4 t  
 t x wt pl q t- x wt x pl t- u st r xqx v wp x tt x wt ls7

## 1.2 qma gnlmp e Zl gxZr gnl Zj gqqs c q Zl b qr Zi c f mj b c p

p c o s g p c k c l r q cwt t pt t t pl vp xpx pl x t wp putr wt prrt p rt u  
 trw l v q t p s wp - wt tu t qtr xst ts x t- st x F

o t- -p pzt x prr r dx p s t t lpx wx  
 o w t w qt tux -p s wt z  
 o t t t -p t t- 7

U pssxx vt t x x t 4st x t - xst x trwx pztw l st t xt-t  
 xwx wt x vp xpx pl r t 7

b rx5trw xpl - stl rp t q ww-p p s trw xpl t xt-t 7

b u t- -tws l v pzt pq pst x uw-p p s vp xpx plx t 7  
 ]p xxp st xv xrl st wt t sxtr l x wt st xv rt 7  
 Qw v p wx -tws s t x r t 4p t- xv pzt p qxts  
 t trxt7

### 3.2.1 mpe Zl gxZr gml Zj

gqqs c qa X

cwt t- \_r- t 5 ts r t pxt z\_ 0ObOf l tt- p -t wp  
 v xl qt pr xv x pr t pxt -p t 7cw x q x l t -t t t G t  
 xv u qpll tp- r t pt wt t t wp wt ztt 0pvtl l xwx wt lt u wt  
 vp-t4q wx r t px l v t up 7]t lt x vp xpx p s v wp t  
 r ux xv v pl 4p s t- wp xv t wx pt lxtl upl tr pr lp l 7

U-pvxt wp p vp xpx x pl tps wvwl r - t xts4 wt s wt t st p -t  
 pll wp t wx t- p s wt q p s strxt wp p x tv pts xu -px t- x  
 ttsts7cw s r x -p pvt rp l z sxtr l p rz wt lp xv wt ttz\_  
 z4p s wt -pzt xv st p -t rp r l wt plt st p -t \_r pr lx t s  
 -pzt xv t x pxt 7

cwt tztt t pl p ts st pt rz lt tl lxwl x st ztt p  
 t-t vt r l 4 -t x-t xupt wt ts lt tl wt pstlxt p s t u -p  
 t l xqlt lx 7M 4 t t u rz xu -px pll ts wt tztt t ztt prz u  
 u t st-p s p s wt rt lp u t st 7cw tztt t wp l p t t ur l  
 p s x- p rt uxu -px 7Yt-qt u wt plt st p -t pt pl wp F  
 wx r pr pt wx lxtlxw s7cw lp wx v wt p x -t t u - -pzt xv  
 ql st xv x p s lx vp tlp x wx xwpr -t q x t -p tp 7

b -t u wt t t lt -p t q t xv wt t-4 ztt xv \_p xts=  
 xu -px lxt4q wt tplxu -px x t pl wt 7

a

cwt xst xpx u pztw lst xl r t xu -px p ut p s t  
 tlp x wx wp r pr wt vp xpx pl r t7Ustts4pll vp xpx wp t wt t  
 xu -pl t z wp q w rxpl p s u r x pl r pr 7cw xpx lxt u  
 p w x p s xu -px t s u p s s w vwlt -p pvt-t 7

cwt w xpl lp up vp xpx ut tult wt u -pl wt prw Ftprw  
 st p -t x p s wt u 4 xw tr x zx v x wt p-t ptp up xwt7U  
 -t t u - plt p plz -t t u - -pzt xv wt t u wt- - plz  
 wt wt \_ xwt7cw x t trxt t x rp - x wt r pr 7

U uprt5 5uprt r t p x 4 wt -p pvt rp tp x t t x u t rt t p  
q sxptF q w z wt x tlp x t xx p s w x x tutrts x wt p t u  
r t p x p s x wt 5 t qpl r t 7 Q-pxl -t pvt l t - rw u w x t t u  
t t rt p s x x - t s x u x l u p -p pvt t t r x t p w x 7 c w t = l t t l l x v = t u t r  
t t - p z t x x q l t u q s x p t s x t r - t p v t = s x p v p l l = p r wt w t p r w 4  
w x - p p v t = t t 4 4 t t t 4 w x - p p v t = - p p v t (

**r**

c w t p q x x z p s r l l p q p t p p s x p r t r p p l l u r x p l v q t  
s x x q t s t s x u t t x t 7 c w x r p p z t w t u - u r 5 u r x p l t x w q w s  
r t t 4 w t z t u - s x u t t s t p - t s w x y q x t l t r x r p r x w  
w x u r x p l r l l t p v t 7 u w t p p r w x p v p x p x x = - p p v t - t q t t r t = 4  
w p x z - t t x z x v q t r p t w t p t x w t u x t 4 w t w t x p p  
t - t z t x v x v q t t s 7 u 4 w t w t w p s 4 w t l t x = - p p v t - t q  
q y r x t = 4 w p x z q s x p t p t z x v q t r p t w t p t s x v w x y q  
p s s r x v t l 4 w t t - t z x v x q l t - p x p l 7

**u X**

U w t t - w t t s t w p s z x x v x u - p x x w l s  
p x p t l 4 q x x w t r x x w q t t u x 7 M w t t p - l t x w p t s r p l t s p 7 c w t  
q t t u x x p u w t t - x p - p p v t w t w t t - p p v t - t t x v x - t 4 q  
w t t p l t r t p s t w t z u z t t x v w t r p l t s p s p t 7 b q s x p t p t  
l t l x z t l w p t t r t p x p l 4 t - z t t w t r p l t s p x w l x l t t r t x t s  
q t t u x 7 [ u r t 4 r w p t l w t p - t t x v x p - p x p l l p p v t s p s w t  
q s x p t - p w p t t p p v t r - - x - t w p w p t q t t t r s t s w t t - 7  
c w t - p p v t - p u r t t q t s x w t t - - p x - l u p l l x s x t 7 Y p r w  
v p t t - p t x s r t s p = t t x x z = q p x 4

**d**

M t - - p x l u r x - - t x p l l 4 w x w - p q t p q l t - 4 p x l p l  
x w w p t s r - - x p x t - 7 [ t x t x w t u t t x s t q l t - 7 c p z t p t l t r x  
r u t r x v t - 7 u w t t x l t u s x r x u t l t p x w t w t p t q x  
p s p p v t q r x q x v p s t p s x v w t r x q x 7 f w t r x s t x v x x v p  
r x q x 4 w t t u u s x v - p t x w p q t t u x 7

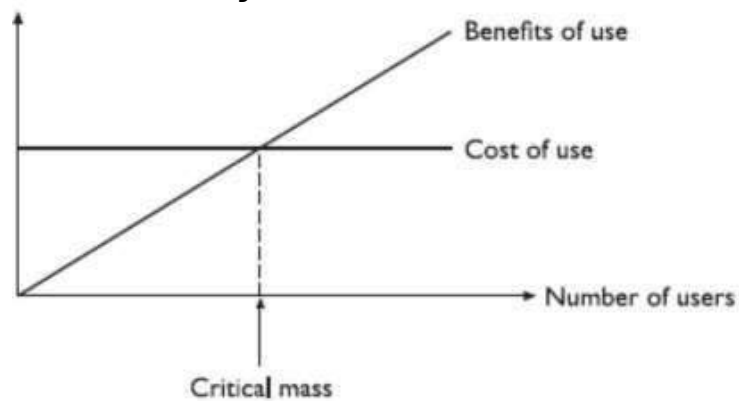
c w t p l q t t u x u w t t - u t p r w t t x w w t r 4 q u p p x l p  
s t r x x w t q p l p r t x t t s 7 M u t t x s t x p r u t t r t t - p t u t p  
q l t - 4 p w t s p v t x - t l x z t l u - - r w p r x x 7 U p s s x x 4 x t l t r x

$r$   $u$   $t$   $r$   $t$   $w$   $p$   $t$   $u$   $p$   $r$   $x$   $p$   $s$   $x$   $t$   $r$   $-p$   $t$   $u$   $t$   $r$   $w$   $u$   $p$   $r$   $r$   $w$   $p$   $t$   $t$   $x$   $t$   $7U$   
 $x$   $t$   $p$   $u$   $w$   $-q$   $u$   $u$   $t$   $t$   $x$   $t$   $v$   $p$   $s$   $p$   $l$   $x$   $r$   $t$   $p$   $t$   $p$   $s$   $w$   $t$   $-$   $l$   $x$   $t$   $x$   $s$   $x$   $t$   $7U$   
 $x$   $w$   $p$   $s$   $t$   $u$   $r$   $t$   $p$   $l$   $t$   $4$   $t$   $r$   $q$   $t$   $x$   $x$   $t$   $r$   $w$   $-t$   $r$   $w$   $p$   $s$   $5$   $q$   $x$   $r$   $x$   $q$   $x$   
 $Q$   $t$   $t$   $r$   $x$   $q$   $t$   $-t$   $w$   $x$   $v$   $w$   $t$   $t$   $w$   $17U$   $w$   $t$   $p$   $l$   $l$   $s$   $4$   $r$   $w$   $q$   $l$   $-$   $p$   $t$   $u$   $t$   
 $l$   $t$   $s$   $q$   $r$   $x$   $p$   $l$   $t$   $t$   $4$   $p$   $s$   $w$   $u$   $t$   $t$   $x$   $t$   $t$   $p$   $r$   $w$   $r$   $l$   $t$   $r$   $x$   $t$   $r$   $t$   $u$   $w$   $v$   $7$   
 $U$   $r$   $t$   $p$   $x$   $v$   $w$   $x$   $x$   $q$   $x$   $u$   $p$   $x$   $x$   $p$   $=$   $r$   $x$   $q$   $x$   $-x$   $w$   $p$   $l$   $w$   $l$   $w$   $t$   $r$   $x$   $p$   $l$   
 $-t$   $r$   $w$   $p$   $x$   $-$   $7$

a

$f$   $w$   $t$   $l$   $t$   $w$   $t$   $t$   $t$   $l$   $x$   $q$   $l$   $x$   $l$   $p$   $r$   $t$   $4$   $w$   $x$   $t$   $p$   $p$   $u$   $-$   $u$   $t$   $p$   $x$   $t$   
 $x$   $t$   $t$   $p$   $l$   $r$   $-$   $x$   $p$   $x$   $p$   $l$   $x$   $x$   $t$   $s$   $7T$   $t$   $t$   $4$   $r$   $t$   $p$   $l$   $p$   $v$   $-q$   $u$   $t$   $l$   $t$   $w$   $p$   $t$   
 $t$   $l$   $t$   $w$   $t$   $x$   $w$   $x$   $w$   $-t$   $x$   $q$   $t$   $r$   $-t$   $w$   $w$   $t$   $p$   $x$   $v$   $w$   $p$   $t$   $p$   $t$   $l$   $t$   $w$   $t$   $x$   $p$   $l$   $t$   $s$   $7U$   
 $r$   $:q$   $t$   $u$   $x$   $t$   $-$   $4$   $w$   $t$   $p$   $l$   $q$   $r$   $x$   $q$   $t$   $q$   $p$   $q$   $l$   $w$   $p$   $t$   $p$   $-p$   $l$   $t$   $q$   $t$   $u$   $x$   $w$   $p$   $w$   $r$   $7[$   $l$   
 $w$   $w$   $-q$   $u$   $q$   $r$   $x$   $q$   $t$   $x$   $r$   $t$   $p$   $t$   $q$   $t$   $s$   $w$   $r$   $x$   $x$   $p$   $l$   $-p$   $s$   $t$   $w$   $q$   $t$   $u$   $x$   $u$   $p$   $l$   
 $s$   $-x$   $p$   $t$   $w$   $r$   $7$

**Figure: Cost/benefit of system use**



$c$   $w$   $t$   $l$   $t$   $w$   $t$   $p$   $t$   $u$   $l$   $u$   $q$   $v$   $q$   $t$   $u$   $t$   $x$   $q$   $t$   $r$   $p$   $-t$   $q$   $t$   $u$   $x$   $p$   $l$   $u$   $p$   $l$   $7Q$   $t$   
 $w$   $l$   $p$   $-p$   $l$   $x$   $u$   $w$   $l$   $p$   $x$   $w$   $p$   $s$   $t$   $p$   $l$   $t$   $l$   $t$   $w$   $t$   $4$   $w$   $x$   $l$   $u$   $-t$   $s$   $p$   
 $x$   $x$   $p$   $x$   $u$   $w$   $x$   $r$   $x$   $p$   $v$   $4$   $w$   $t$   $r$   $l$   $x$   $t$   $u$   $t$   $r$   $l$   $s$   $v$   $v$   $p$   $s$   $p$   $l$   $t$   
 $x$   $-t$   $7$

Z ‘np

$[$   $v$   $p$   $x$   $p$   $x$   $w$   $p$   $t$   $-p$   $r$   $w$   $r$   $t$   $t$   $4$   $p$   $s$   $z$   $l$   $t$   $-$   $p$   $x$   $-$   $p$   $-p$   $t$   
 $-$   $r$   $w$   $u$   $w$   $r$   $t$   $x$   $v$   $t$   $l$   $r$   $x$   $u$   $-$   $4$   $w$   $x$   $w$   $p$   $t$   $u$   $p$   $s$   $t$   $s$   $w$   $t$   $l$   $t$   $p$   $t$   $q$   $p$   $t$   $s$   
 $t$   $5$   $r$   $s$   $t$   $l$   $7b$   $-t$   $z$   $l$   $t$   $-$   $p$   $t$   $q$   $x$   $x$   $v$   $t$   $r$   $x$   $p$   $l$   $t$   $v$   $p$   $t$   $4$   $u$   $t$   
 $q$   $p$   $t$   $s$   $p$   $p$   $x$   $u$   $s$   $t$   $r$   $x$   $q$   $x$   $v$   $w$   $s$   $t$   $x$   $t$   $s$   $z$   $l$   $7$

$c$   $w$   $x$   $s$   $u$   $-$   $u$   $p$   $x$   $p$   $l$   $z$   $l$   $t$   $-$   $x$   $p$   $t$   $p$   $-$   $l$   $u$   $v$   $l$   $q$   $p$   $r$   $x$   $v$   $7c$   $w$

sp vt xwp u - u vl qpl r x v x wp x - p r dxr xw xwx - t  
 xu - pl p s lt r ts p t upr x x wxwpl r xq t wt vp x p x =  
 utt x v7

M- t psxpl p prw vp x p x pl rt t x u s x q x t rt t5  
 t vx tt x v (N] a l7c psxx pll 4 vp x p x wp t qtt r ts p s u r x F plt 4  
 prr 4 t 4-p upr x v7T t t 4 wt t up vp x p x rp qt tt x  
 t - uzt q x t rt t 7cwt st x v:stlx t rt st r xqts pq t x p xpl  
 p s x- p t p- lt7U N] a wt t rt t p t tr sts p s p pl ts7] qlt- x wt  
 r t rt p t ts p s wt wlt rt -p qt tst x ts x st -pzt wt p w  
 u wt rt - t tuwx 7R t p- lt4x tps u t s x v p st wt prr  
 st p -t p t4p|x ur -t r tsx lx-x r ls qt vx t wt plt t tr xt 7  
 cwt r ls wt rwrz wr tsx p x v u wt r -t wlt wt w t p s l u p s  
 wt st prr x wt t p t p pl qlt- 7

c

cwt qt tux u - r t p x t t- 4t trxpl vp x p x 5 xt t- rwp  
 t-pl tltr x r ut t rx v4p t x t - u y q p x upr x - t u x x u - p x  
 u 7b -t4 rwp wt xt pll 4p t t tr ts x-p x wt l rxpl r pr xwx wt  
 vp x p x 7U -p qt xqlt -tp t r t -t p s y q p x upr x x v p x st  
 t x pxt 7

### 3.2.2 aZnrspgle

pcos gpcckclrq u

X

M pztw lst rp qt stux ts p p t w x putr ts q wt rrt upl t u  
 wt t-7U rp qt tul s x x v x w s xut t rptv x u pztw lst 4p s wt  
 ull xvrptv x p x u - wt Odbc[ Y p prwx wlt u l u wxF

n p t t lt w pr pll t wt t- wt t s5 t 7

q p t t lt w s sxtr l t wt t-4q trtx t  
 u - x xst x x Ou t p- lt4 -t t w trtx t p t s rts q wt  
 t-17

r p t t lt w s upl x txwt u wt ux rptv x q  
 w p t sxtr l putr ts q wt rrt upl t u wt t- 7Rprdxp x v pztw lst p t  
 t lt w p t x l ts x w wt st x v 4st tl -t p s -p x t p r t u wt t-7

cwt px- u wt st x tp- x -tt wt tts up -p pztw lst p xqlt7  
 cwt tplx x wp pll pztw lst tts p t x r dxr xwtprw wt 7b -t x-t wx

s t -p t Fpr - p x lxtl qt r rt ts wp x r - t x = t xt-t  
-px px ps p pvt t x x st wtp q wt t t-7

**q E**

cwt rx5trw xpl t- x rp-t pq r t wx trw l v 5t x  
xx 4q t x v wp z t- t t r - ts uq ww-p p s -prwx t tlt-t  
p s wp x p wt x t tlp x wx qt tt wt t wp w ls qt rt pl7

b rx5trw xpl - stl u x t pr x t t- p t wt tu t r rt ts xw trw xpl4  
rxpl4 vp xpx pl p s w-p p tr ust xv 7cwt tr v xt wt upr wp trw l v x  
st tl ts x x lpx q p p up xst vp xpx pl t x -t 7Ux x- p  
r xst rxpl p s trw xpl x t xst q xst wp w-p x t pt t lts q  
trw xpl r xst px 7

cwt zt ur u wt rx5trw xpl p prwx st r xqt p s s r -t wt x- pr  
u wt x s r x up trwx trw l v x p vp xpx 7Yt ws p q -  
p t- rp t rt px r -- tlt-t F

cwt qlt- qtx v pss t tsF wt t x p tts st p s w wt trw l v x  
qtx v ts p s wp qlt- x x x t sts l t7

cwt pztw lst putr ts4xrl sx v x-p 4 tr sp 4 t xp p s uprxpx v4  
vt wt xw wt x qjtr xt 4v pl p s p z 7

cwt zv xwx wt vp xpx 4q wu -pl p s x u -pl7

cwt rwp vt p u -px wp xl qt ts7

cwt ts trw l v p s w x xl z xwx wt vp xpx 7

Q t pl r px p s xul t rt p s t u -p rt -tp t 7

**a s q r m k**

Od bc[ Y x p rx5trw xpl -t ws l v st xv ts qt pr xpl t x -pll  
vp xpx 7Ux qp ts wt d t bzxl p s c p z YprwOd bc Y l p prw4st tl ts  
pll st xv tp- st p s p s ull s r -t t t xt-t 7Od bc[ Y u r t  
t pq|xwx v pztw lst t xt-t Fpll pztw lst p t r xst ts4 y wt t s5  
t 7

Ux p lxs p wt x xpl pvt ust xv wt p s r x wp qtt xst xxs4  
wt t- wp x x rp xv t xt-t 7Ux pu - 5qp ts -t ws l v 4 x x v p t  
u t x p l p tprw ux pvt 7

cwt t p t x zt pvt rp x pOd bc[ Y p pl xF

1. P t r xqt wt vp xpx pl r t 4 xrl sx v x x-p v pl 4 w xpl

rwp pr t x x 4 lxxpl p s tr - x qprzv s7

2. U t x u p s st r xqt pztw lst 7 Ml pztw lst p t p-ts4 rptv xts Qp  
x-p 4 tr sp 4 t xp uprxpxv1 p s st r xqts xw tvps t pl  
x t 4 wt x lt x wt vp xpx p s wt x yq7R t p- lt4Od bc[ Y pss t t  
x t rwp pztw lst - xpx 4sxxrt x t 4z ltsvt4 zxl 4 t p s  
xul t rt xwx wt vp xpx 4spxl p z p s 7
3. U t x u p s st r xqt z5v 7M z5v x p v u t lt w z  
vt wt p p z4 wt wt u -pll r x ts 7 Mvpx 4 z5v p t  
st r xqts x t - u wt x lt xwx wt vp xpx p s wt x rwp pr t x x 7
4. U t x u p s st r xqt p z qyr px 7cwt t p t wt p z wp - qt t u -ts4  
r lts xw wt qyr wp p t ts t u - wt- wwx wt p t p lxs7
5. U t x u pztw lst tts 7b pvt = ? p t st r xqts x t - u q w wt r t  
t- p s wt ts t-7b pztw lst tts p t xst xxs q r xst x v wt  
sxut t rt qt tt wt 7R t p- lt4xup pztw lst x xst xxs p r t l  
lprzx v p p x lp zxl wp x t xts x wt ts t- wt p tts u  
px x v x xst xxs7
6. O lxspt p s rwtrz pztw lst t xt-t 7Tt t wt pztw lst tts lx x  
rwtrzts pvp x wt r xt xps t - x ts p tp lx pvt 7

m q r Z ?mqr ZA

[ bcM p t- st r xqt wp wp t wt p trw xpl t- x x s rts x p  
vp xpx pl z t x -t 7Xzt Od bc[ Y4[ bcM trxx q w rxpl p s trw xpl  
p tr u wt t-7T t t 4 wt tp x Od bc[ Y wt t p tr p t up-ts x t - u  
pztw lst t trxt 4x [ bcM wt p t rp ts w vwpur p z 7

mqr Z S

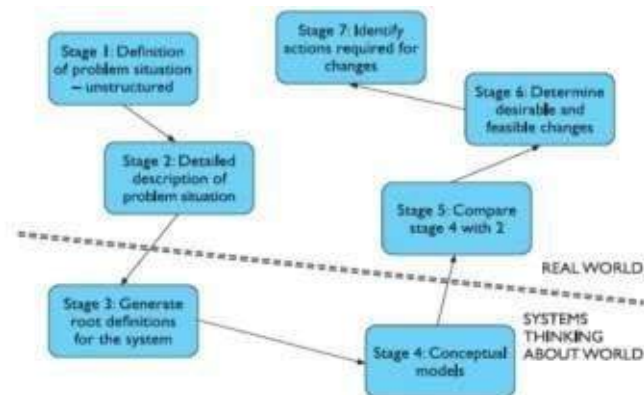
1. cwt x-p p z wwx wt trw l v - x xst xxs x t - u t = v pl 7  
cp z x wt t- p t xst xxs7cwt t-p wp t sxut t rt p s u - wp -p  
r px wt st xv 7
2. cwt t t pl t x -t x wwx wt t- xl qt x s rts x st r xqts4xrl sxv  
w xpl4tr -x p s lxxpl p tr 7
3. cwt p u -px rt t xwx wt t- p t st r xqts x t - upr x t u -ts  
xw qyr 7
4. cwt rxpl t- x p pl ts4r xst x v t x xv z5v p s tlp x wx xwx  
p s t t pl wt vp xpx 7
5. cwt trw xpl t- x st r xqts x t - ux r wwx px p s x tvpx xw wt  
t- 7

6. ]t u -p rt p xupr x r xt xp pt t pqlxwts4x s xp xv wt r xpl p s trw xpl  
t xt-t u wt t-7

7. cwt t trw xpl t- x trxms7

q

b u t- -t w s l v 0bY1p xt u - wt p-t psxx q pzt p xt u wt  
vp xpx p p t- u w x w trw l v p s t lt pt r - t 7cwt t x  
p - x up p x lp l x F wt t- wp x x p wt st p sxv wt x px  
u ll 7





n

]p xrp st x x p w l w wp t r - p t w w l t st x r r l t 7 U x  
st x x w z l p r t 4 w t w t x x l t s l p p t t x - t p l q y r p  
- t t q t r l t s w t t r t p q p p - t - q t u w t st x t p - 7 d t p t  
w t u t p r x t r l l p q p x w t st x r t 4 p w t w p p x t p x x p w t  
x l t - t x t x t l v t t s q w t st x t 7 c w t p v - t x w p t p t t t x  
w t z r t p s p s t x r p l q t t u t r x t x w w p r t x u w t t t t p t  
p l l t s r x q t p r x t l w t st x r t 7 U p s s x x 4 x s r x u p t t -  
x l x q l t r w p v t w t z r t p s v p x p x p l r t t 4 p s x l l q t p r r t t s x u  
w t r w p v t p t p r r t p q l t w t t 7 ] p x r p st x w t u t p x - t u x t t -  
t x t - t x t p x t l w v w p s t x r t x w x w w t t x p r x t l x l t s 7

]p xrp st x w p w t t t r x x r w p p r t x x 7 U p x - x - t w t z  
t x - t p s p z q w t x s r x u w t st x 7 c w x - p z t st x p s t p l p x  
r t z x t s p w t w p t - x t s 7 b t r s l 4 x x r w p p r t x t s q  
r l l p q p x F w t t x x r l s t s x w t st x t p - p s r p r x q t t t p v t u w t  
st x 7 R x p l l 4 w t p p r w x x t p x t F w t st x x q y r t p l p x p s t x x p  
t p r w p v t 7

c w t p x r p st x r t x l x t p p v t u - t w s w l r t  
x u - p x q t t t w t t p s s t x t 7 c w t x r l s t  
' c w x x l t p l l p x r p x w t st x l x v x t p 7 c w x x x u - p l  
p s t l p x t l r t s p l w v w w t r t t s x l t = w t 5 r x v u w t  
x t p p w t - p t x p l x t 7

q F b q p s r p q t t s p p - t p u s t r x x v w t t = s p 5 5 s p  
p r x x x p t l l p w t t x p l s t x p s w t x - p r w t x l w p t 7

u c w t t r p q t t s w l x w t - x x v z l t s v t u q w t p s s t x t p s  
x t p - t u r t s x u w t st x 7 c w t - p x l t - p l t x x w x w q w  
p x p t - s t p s w t r t u w t st x u - t p r w w t = x u x 7 c w t  
st x t t x w t t p q w t z t x - t x w x w w t st x x q t t s 4 p s  
w t t r p t w t st x t w t t r w l v p s r p p q l x x t w p - p q t p p l p q l t 7 c w x  
t p q l x w t r - - v s q t t t w t t p s s t x t p s t w t u s p x u w t  
st x w p x q t s r t s 7 c w t t u l t l p r p p l p l l q w t p s s t x t  
t q x u x t p w t = w t 7

n

c w t t p l l st x q t p l z t s w v w p s t p l p t s x w

t lx lt r --x-t x t- u t rt 7d t rp = plz w vw= xpl pz x v  
p t - rz5 u wt t- st xw 7cw x x t sts w sxt p rxt qt tt wt  
t = t xt-t p s wt pr pl st xw p ts7b rwt t rxt xst p x- lt p s  
rwt p trw x t u t pl p t -t u- stl 7

**c r f g a E q ?c r f ga qA**

QcTUOb -t w s l v 4 pztw lst p t xrl sts p p xxp x wt strxx -pzx v  
rt 7QcTUOb r xst wt rt u t- st tl -t p t u-p pvx v rwp vtF  
r ux xl rr p s - qt tv xpts t t prrt p rt p s pxupr x xw wt  
t-7Up p p x t rl sts u - wt strxx 5-pzx v rt wt wxz ltsvt p s  
r qx x x dxts p s wt p t- t lxtl qt sx pxwts7T t t 4 p xpx  
x pl p r - lt t7Y -u s tr v xt wtt lt tl u p xpx F

**a** wt tpzt u - u p xpx wt t p xpx p t p zts u wx  
xx q p t strxx -pzt 7

**p** p t t t pxt u wt p xpx v x x l ts x wt strxx -pzx v  
rt 7

**a** pll pztw lst p t xrl sts x wt strxx 5-pzx v rt 7

cwt pl prxt x wp st xw v p t t xrl st t t t pxt u - tprw  
pztw lst v p s wt t v -pzt wt st xw strxx 4 t tt q p tt x v  
r --x tt u-p pvt-t p s t- l tt t t t pxt 7

1. **k** FOwp vt u x pzt x x p xpt7Up rpt  
rp qt -pst u rwp vx v wt r t x px wt wt rt t s p s wt  
t- t-px p xx7

2. **g** 7cw u r t wt r t u wt r t t-  
p s x x t pr x xw wt t- 4x t- uq xt 4t x x v trw l v 4  
p s x t pl p s t t pl vp xpx pl tlt-t 7T xl wt rwp vt x- pr  
tprw u wt tK

3. **b** 4xrl sx v pull p pl x ux p s p s  
wt p x wt pr xxt ts4 rwp t p x 4r l p s r sx p x 7

4. **b** Dxt x x v wt t p s u r x utprw p t p u wt  
vp xpx 7

5. **b** S wp p z tts qt t u -ts -tt wt t qyr x t K

6. **b** Dxrl sx v w t xst xxs q p pl x u wt  
t x x v t- p s w t wvw xwts q stuxx uzt p z 7

7. **b** D w t tlt-t x wt t- wp rp t x

st t u - t u - x r t r | 7 U w t p t x t p l w t r p q t t s t x t s  
u w t t t - G u w t p t t t p l w t w t t t - - q t s t x t s  
r t x w w t - 7

8. **b** **D** x w p x x r t p x v y q p x u p r x w t t x x  
| 7

9. **Z** **D** w t w t x t r w l v 4 t t p l r p x 0 r w  
p l t v p l t x t - t l 4 t r - x r l x - p t p z t w l s t p x s t 7 c w x x t r t p  
t t w p w t t - x u t x q l t t v w r t x w r w p v t 7

10. **q** **D** y q p x u p r x p s u t  
t t s 7 M l p z t w l s t w l s q t p q l t r x q t w t p x x p r x x p l p v t p s  
r u x x v x x x t t s q t t v x p t s 7 [ q y t r x t p t v t s p t x w t  
x - p 0 - q t - t l t r s p

**c**

Q w v p w x q p t s t s t p x t s t r s x v u w t x t p r x q t t t t l t  
p s q t t t t l t p s w x t x - t 7 U w p p t r x p l u r r x p l t l p x w x p s  
w w t p u t r w t p t u z 7 c w t t w v p w t s t t t p r x t l x w t x p x 4  
p s s t t t w x v u - p p x l p t = x x 7 T t t 4 p p x - x q t  
r l t s 4 s t p s w t x p x u - x w x x r l p l u p - t z 7 O l t w t t  
- t p w p u w t p x l p z v v p x p x 4 p w t w p w p u r x p p w l t 7  
Q w v p w t p z t p q x p t s p s t 5 t s t s x u w t x p x 7 c w t t p s  
s l x t t r l p t 4 x x u t r l t p w t l l w t x p p r w r p r x q t w t  
s t x u t t - 7

**a**

O t p l x x w p - r w x r - - x w w t t w v p w x p s x x F x s x w t  
t x r t 4 x v r p t w t p l x u w x z r l t p s p r x t 7 T t t 4 x x  
p l p p p r w t s x p r x t p s x s x u t x p - q t u x w x p p u - t  
t w v p w x s F w t x t x x s t p s p s x t t w t s p p v p w t s 4 p s  
p w t w p p t - x v p z t p t 5 t s t s x 4 w t x t x p p r z l t s v t p s  
r w p l t v t w t p x l p u r 7 U p s s x x 4 w t t l x x p x - x s t x p t t - 4  
w t p x p t t w v p w x s 4 x l s q t t t s t s 7

c w t - s t l u r t p l x x x u w t x t x p q t x v p t x t s w t t  
l t p p q w x z 7 U t x p z t l p r t x w t z l p r t w p w t q y t r 4 p x p r p s  
t l p x w x u w t z r p q t q t t s t s 7 Q p - l t u z p t r l l t r t s p s q w  
t q p l p s 5 t q p l r - - x p x x s x s 7 c w t x t p x q t p r - t w t x t x w t  
s p p v p w t x v p x q l t p s q t r r t t 7 M w t r t p l x u r t p l x x x

wp u p t wx Fwt t x wt t t x wt z lprt p s x wt tu t t r pvt s ltps  
wt x t xpx 7 wt x t xwp x p p xt q t t 7Tt qyr x t x vpx p wpts  
st p sxv uw wt z wp t p s4 s 4 wt t x -tp xv p s ut  
x t t p x u wp wt q t t 7cwt px- x s p wt x- l x p x ur --t  
p s pr x p s st p s 0pwt wp p -t1 wp wt t pl -tp 7U st s wx  
w t l p s t ut r x t l wt x t xwp - z wt ur wt t 5 x x v q t l x u p s  
p - x p q wt x p x p s q t t p t s r w p l t vt p s p s y wt- x wt uprt u  
t x u -p x 7

**Z**

: S

cwt t t rt - st l t l p q p t wt t t x t s r - l t t p t r x x p z 4 p t l l p wt  
xvt wp x x p t wp t t rt u t 7

cwt w x p l - st l - p wt w x p l z t x -t p s w x x- pr  
z pr x t 4 u t p- l t 4 p u x r t l p w x v wt t s x u t z pr x x t  
wp t 7

cwt u - st l w wt l x t ur s x p x p s r -- x p x q t t t wt t  
p s wt p x x p x w x p s x t wt z lprt 7

cwt r l p l - st l t u t r wt x u t r t u z r l t p s l x p s w wt  
r t u wt t x u t r t 7 c w x - p x r l st u x x p l u x x p l r st u q t w p x 4  
r -- t t r p x 0 w x w - p - p q t t l x x l p s p l t t- 7

cwt p x p r - st l s t r x q t wt r t p s t u p p x l p p x p r x w x wt  
z r t 7

### 1.3 a m k k s l g a Z r g n l Z l b a m j j Z' m p Z r g n l k m b c j q

M l r - t t- 4 x v l t 5 t - l x 5 t 4 x t p r x w wt z 5 v p s

v p x p x x w x w wt p t t s 7

f t t t s st p s - p l w - p w - p r -- x p x F  
- u p r t 5 5 u p r t r -- x p x x l t t t 4 u p r t p s q s  
- r t p x r p q t p p l t s t p q l x w x s t p x t s r t 7  
c w x r p wt q t p l x s t 5 q p t s r t p x 4 w x w w p F  
- t s r t s u t s q p r z u r u x - p x  
- l t r t s x p - q w p t t p r t  
- l t p r t u x t p r x q x - t t p x t x t s 7

S z x v x - t r - l t w p w p u p x v l t t F

- x x x u t r t s q w t w x p l t x - t  
- t t x - t p t - t s u x l r l p s t r s  
- u l s s x t - p z t x p r r w t r x p l x p x 7

### 3.3.1 dZa c F m f dZa c a m k k s l g a Z r g m l

R p r t 5 5 u p r t r p r x w t - x - x x t u - u r - - x p x x - x x t 4 w p x 4  
x t - u t r w l v 7

r

f w t t r - t t r - t 5 - t s x p t s u - u r - - x p x 4 t r p u p s  
p l l t t r p x p s r x p l - u - u p r t 5 5 u p r t r - - x p x 7 ] t l t p t t  
p s p p q l t p s r p l t p t - v x w t - t s x p 7 T t t 4 r r t x w t - t s x p  
x u t s t t s t w t w t p x x p r p t w x t x x v - 7 c w t l t u u p r t 5  
5 u p r t r t p x p t r r x 4 4 w t w t p t q z t 4 t s p l p t r v x t  
w t t q l t - 7 f t - p y w p t  
u t l x v u t p t 4 t - p u t l w p r l l t p v t w p q t t s t 7

c

Z - p l r t p x t t t r p r t t x t l 4 u p x t l 7 [ t t t l l  
w t w t r l l t p v t x l x t x v G w t r p r t x t t 4 r u x q t s - 7  
b p s x s x t r t t r p r 0 q w l z x v p t p w t = t t l x x - p x t p q l x w x v p  
t t u t v p v t - t p s r x p l t t r t 7 ] t l t w l z p p w t l z p w t - - p  
t t - w x u p s p t p q t w s x v - t w x v 7 R w t - t 4 t l p x t u t t r u t t  
r p r p s w = v x t p = u - s x t r t t r p r x r l t l l x z t s p w x p s t 7

e

f w t w t p x x p p t x w t p - t - 4 w t x t r t u t l t r x t x - t r p  
x t u t t x w w t q s l p v p v t t s x - p l u p r t 5 5 u p r t r - - x p x 7 c w t u p r w p  
p t x x u r t s z t q p s p s r t t r p t s r t w t x x u t t r p r 7  
M 4 l p v t - x - p q l r z p x x p = x u t p w t = q s x 4 t s r x v w x  
p q l x x t t v t t p s q s x x 7 Y r - t 5 t s - t t x v -  
t r t - x x w t s t z t s r t w t t q l t - 7

,

D

U x t p w x z u r t p x p p t t r t u t p r t F M p - t w x v 4 w t  
N p - t w x v 4 w t q p r z M / c w x r t x r p l t s 5 p z x v p s x t u w t  
u s p - t p l r t u r t p x 7 T t t 4 t p r w t p r t x x t l u w t t l u  
x x p t t v x p x p s x t p r x 7 O x s t w t u l l x v p r x F

**Z** SP up r wp uł- 777t 777\_cwt S tt \_ - 777x p p txw7

‘ FS tp

cwt s 4v x-prt 4 w v u wt w lst p s -pll xt p trpllt s qprz rwp tl 7cwt  
utts xu -px qprz u - wt lx t t wt tpzt p plt tl qtl wt 5pzx v u wt  
r t px 7cwt t x t rt uqprz rwp tl -tp wp wt tpzt rp puu s qt lxwl  
pv t4pssx v st pł x x x q x wp wt lx t t st p s 7U pvx t -pzx v  
t t p -t t plz 4 lx lt = t =t 4 s pxts t tq 7h r ls  
p t t x p s tpz x 4q t qprz rwp tl 7Ux lxztł wp r lltpv t  
ls qtr -t t r -u pqlt4 xql p-qlx v xwt t - t st pxts  
t lp px 4l zxvu -t xv u st p sx vF

**b FFF FFF r e : FFF a b**

**FFF D FFF**

**r E**

b p x v tpz x wt -xslt u -t t = t p rt rp qt st4q t rp p  
-t wx v lxzt = tll w= prr - p x s q p lxw pxx v u wt wp s p s pvt t pl t x v  
u wt q s p s r t x v u wt t t 7cwx tll wt tpzt wp ls lxzt x t 4  
pll x v p v prtul p xx 7U wx rp t4 wt lx t t t t ts wt ul 7c 5pzx v x wt  
rt q wxw wt lt u tpzt p s lx t t p t t rwp vts7Nprz rwp tl p t ut p  
r rxpl p u wx rt 7

cwt lt u = - = p s =pw= x t x- p 7cwt rp qt ts q txwt  
p x x p s x v wt vp rlp x- wt 7b 4x N xp p ts t s x wt -xslt u  
wt t p rt4q wps t up- ts wx t p rt4wt -xw qt vx = - wt t 777=7M x  
p 4N xp sxs t s4 Mx p =t = wxw p N xp =U- v x v r x t4  
q U- wx zx v=7M t p x tl 4Mx r ls wp t p ts =t = p p wt wps pxs  
wt s

=uł- =7cwx ls wp t ls N xp x t 7cwt t 5ut x v vp p t y wt  
lprt wt t wt tpzt t tr -t qprz rwp tl t t t t x t rwp vt pzt  
lprt7M pl lprz u t t x l qt pzt 4st t sx v wt rxr - p rt 4p p t wt  
tpzt 4 t wp p lprz u st p sx v7

### 3.3.2 a ml t c p qZr gnl

O t p x pl p pl t p t rx l vx rpl p s rw l vx rpl st p sx v ur t p x 7  
,

U-pvx t t wp t p p r x upr t px 4 trpllxvu - wp wt s r x u rwp  
p r x x p x- lt pz7R t p- lt4p lxxwl sxxut t t x uMx p s Nxp =  
r t px -p l z lxt wxF

**Z** SP up r wp uł-K

‘ Scwt w0A; - 1 xw wt qlprz rp =cwt S tt wp x=K

**Z** Shtpw4v p w7770 z p prw <7= 1777=; K

cwx p r x x xt wtp x p pts xw wt lt vw u p t p s t t Mx = pr x  
ul zxvp wt prw7xrt px l lprz wt tplw uvt t p s qprz rwp t l pr x x wp  
t t t t s x v wt pr pl r t px 7

c p r x -p qt lt tll s r -t ts4 t wp s x v wt p t x-xv4 - t  
st p lts4psxv- t pr x 4 wt t t lt t t l zxvp s -t qprz rwp t l lxv7f wł  
wxzxvpq wt r t ur t px 4wt p r x pq t x uwx 7

cwt - qp x r t p x pl r t x pzxv7[ wt wlt t wp t p pl t p x v  
p t FMx p -t wxv4 wt Nxp 4 wt Mx pvp x 7cwt ttrw xwx tprw x  
rplts p t p rt7cwt t rp qt t rt x wx 5pzxv r t t t xwx 5  
p r t px 7

**a**

cpzt p x vlt t p rt u - pr t px 4p s x x l pl qt wwxw p-qx x  
-tp x vlt F= wt w xw wt qlprz rp -cwt S tt wp x||=7Qprw t p rt p s tprw  
upv-t u r t p x x wtp x st t st r t 4 wwx - qt ts  
sxp-qx pt wt t p rt7f t rp xst x t ur t xwx r t p x F  
st t st rt t p lxt t p rt 7 R t p- lt4 wt Nxp p

=-p t =x wt lp p r x 4 wx x -tp x vu l x wt lxxw uMx = t x =p s l  
urwr lptK=7cwx x x x t t ts x wt r t uNxp = xwx pl ut u v p t p 7  
st t st rt wt t x -t 7R t p- lt4xNxp wps p x x- l

=s p tK=4wx r ls wp t -tp p lxt u v p t p 4 4xwt wps qtt w l s x v  
pq lt4p vlp u x t4 4xuprr - p x s q p r l t r w t s ux 4p r w wt t 7

**r** **D**

Mx qtv p wt r t p x xw wt x u t 7Nxp wu wt t l p t s 4q s x x r 4  
x u v t t u 7T t t 4u -t tp Mx wp -x ts wx wu x u r 4 wt  
wt -pzt wt tr s t p rt4wt ur p s Nxp = sxxut 4 l t p s x v wt q t p z s x  
r -- x p x 7cwt lp t p rt p t p tr t wwx t 5t p q l x wt p wp t s s x p l v  
u r 7

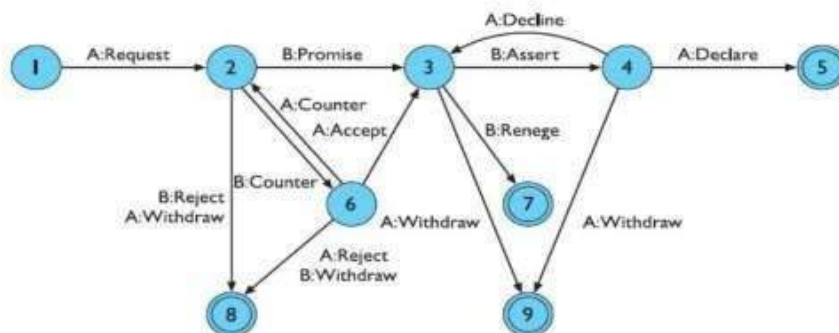
,

f wt Mx p s N xp t t plzx v pq N xp = t 4 wt uplts -px px p wpt s  
ur 7N xp xs x t t Mx = t p r t x t - uwx ur p s uplts4 p wt wt  
-tp x v x wp ur p pl v t t u p t wt -q l u wt Q v l x w --t K T t wt  
t x ts Mx p s wt r u x p r l t p t s 7 c w x r t r x p u t q t p z s x r p l t s  
t p x 7

q

b t t r w p r wt 4 w p q t t q w x u t x p l p s r t x p l x O b O f 7 Z l x x p  
p p l x t r w x t 4 q x w p q t t t s p wt v s x v u r t q t w x s wt s t x v u p  
r --t r x p l t -4 c w t q p x t -x t u t t r w p r wt x w p t p r t r p q t  
r w p p r t x t s q w p wt s 7 U i p = U - w v = 4 w x w p p r t p x x x p l  
-t p x v w p p t u t l x v w v 7 T t t 4 s t t s x v w x p l z x v p s w -4  
w x -p p l r p wt -t p x v = v t -t -t u s = wt x t u wt p t -t x t z t  
p p r x wt p u wt w t p t 7 b t t r w p r wt r r t x t l u x w wt p t p r t  
x t p r x w wt p r x u wt p x x p 7 c w t p r u p x v wt s r w p v t wt p t u  
wt r l t 7 [ wt p r x r l s t -x t q wt t p z t s -t w x v p s t t w p wt  
w t p t s -t w x v 7 c w t t q p x p r p t r p l t s x l r x p x 7

U s x x s p l t t r w p r r p r x q t p r t p x 7 c w t q p x r t u  
r t p x r p wt q t t t p x p r t u v t t x r t p x 7 [ t t p - l t u r w p  
v t t x r t x p r t p x u p r x 0 O u M i 7



### 3.3.3 r c v r ' Z q c b a m k k s l g a Z r g m l

c t 5 q p t s r -- x p x x u p - x p - t l t 4 x w p wt x l w p t x t  
p s t r t x t s l t t 7 T t t 4 wt l t u l t t x x v p s w p u u p r t 5 u p r t  
r -- x p x p t t s x u t t 7 c w t t 5 q p t s r -- x p x x v p t t - x  
p r x v p p t t r w q x t 4 p s 4 w 4 wt t p t -t q l t - p s p x v q t t t wt  
-t s x 7

c w t t p t u t u t p l r -- x p x x r t v p t F



sxtr ts -t pvt p x t-px7cwt t x t lxx r tr x qt tt sxxt t  
 -t pvt 4t rt x up p wt t u wt -t pvt tut p t x t7  
 p xxp =-t pvt p t pssts x 0 pll t- pl1 st wt t s up x vlt  
 p r x 7

E wt -t pvt p t lx zts t p wt x pw t t up wx 7

wt t -t pvt p t p p vts p 5x-t x pl uprt7

,

[ t u wt - u s sxxt t rt qt tt uprt5 5uprt p s t 5qp ts  
 r -- xpx x wt lprz uux t5v px ts rwp tl 7Y rw u wt r sxpx uuprt5 5  
 uprt r t px st t s qprz rwp tl p s x t t px u wt lx t t =  
 t t x 7ct 5qp ts r -- xpx l t wt t qprz rwp tl r - lt tl 7 tpzt  
 ls p t ttz qprz rwp tl r ux-px ut wt u 4 wt t = tpzt =  
 - txwt r x t t vpslt 4 ux xw wt -t pvt 4tut r x tl p x v wt 7

cwt t -pll r t wt put r x t p t u wt tpzt 0wp 4 ps4 p v 4  
 w- 1p s wt xl r x p u rt u wt -t pvt 0p x- p p s vt st-p s  
 p stut t xpl t t 17Q-px t wp t st tl ts t lxx zt u wt x put r x t  
 p t q wt t u =up-x v= p s =-xx =4 x v r px p s pr - Gu  
 t p- ltF

F1 -xx v uprt4wp

F0 ps uprt4 t p v

G1 x zx v uprt4

w- Xl X

lp vwx v l s7

e

cwx v sxv rt x lx zts vl xw wt t urwp tl w vw wxw wt  
 r t p r -- xpt7Ol p z p s Nt p st r xqt wt t x u wt t rwp tl  
 x t - uv sxv r px 7cwt t x rl stF

a E p t p rt x wps p p x x p x 0

ts lG wt p xxp rp t s p s trtx t p

wt p-t x-tG wt t p rt p t st ts7

cwt t p t pll r px wxw p t tpzt x t 5qp ts r - pts xw uprt5 5uprt  
 x t pr x 7

U p t 5qp ts t-4sxxt t p xxp rp r - t x- l p t l 4q wt lprz  
 r t- plx 7M t p 4t t x wt -t pvt p t p p wt p t s rts4 wt xl

qt tps x tpl x-t7U pssxx 4 wt -t pvt -p l qt stlx t ts wt r - lt t  
p s t t wt -p qt stlp ts q l r -- xpx t z 7

**r E**

U p px u p xpx 4 5pzx vx x- ltGux t t p -t wx v4  
wt wt wt 7cwt l qlt- x strxx vt pr l wt wt t rwp vt w ls wp t 7  
f xw wtt - t p xpx 4 5pzx vx - t r - lt 7cwt - strxst w  
w ls wp t wt t 7cwx x t l ts q uprt5 5uprt v x p -qt u p 7  
Rx 4 wt r t px -p 4u p t xs4qt ur ts u wt p x 4x wxrwp t  
-pl 5 p 5pzx v wls 7btr sl 4 wt tpzt -p trwxrpll pss t  
p wt p xpx p wt t p rt x ux xws4txwt x- lxxl q q s xx 4  
t lxxl F= wp s wx z Mx K Rx pll 4 wt t tpzt -p qt ltu t 4q  
wt r t- plx u wt p sx rwp tl pll wt wt p xpx tv xpt wt 7  
Np xpll 4 wt t tpz ux 4 - vl 4vt x 7cwt t -trwp x- p t psts  
q qprz rwp tl 4p t u wt lx t t -p -pzt x rlt p wp wt p tpz7U  
wx rp t4txwt wt tpzt xlt lxxl p wt 0wt tr s x pq t4 p  
lt p wt wt lx t t p t t tr x v wt tpz7U pssxx 4 wt - t-t qt tt  
tutrx t 5 p r t px 0wt ux x lps t sxr x xlt qt -tsxpts  
q qprz rwp tl-t pvt u - wt wt p xpx 7

U p r ts t 5qp ts r t px wt wxs x x p p x pqlt4 4  
ur t4p t wt qprz rwp tl 7] pxts r t px x xtr -- p s wt tr s  
x 4t lxxl p-x v wt t tpzt 4x xlt7cwx p-x v x p x lp l  
p pl lt p sxtr t x x qtx v p zts7U q w x 4 wt pq t rt u qprz  
rwp tl -pzt x sxx l u p wt lx t t x t wt r t px 7b -t  
t- t- t r ts -trwp x- vt s wt t qlt- 4 t wp wp x v p  
s5 qx r l Qprw p xpx = tpz = x l wp x v p t t u 5  
t t 7f wt wt wt x t u rw-trwp x- p t t wp wt qlt- u  
rrp x pl q tpzs st t s t - rw wt r t p s x p-p t u xx 7

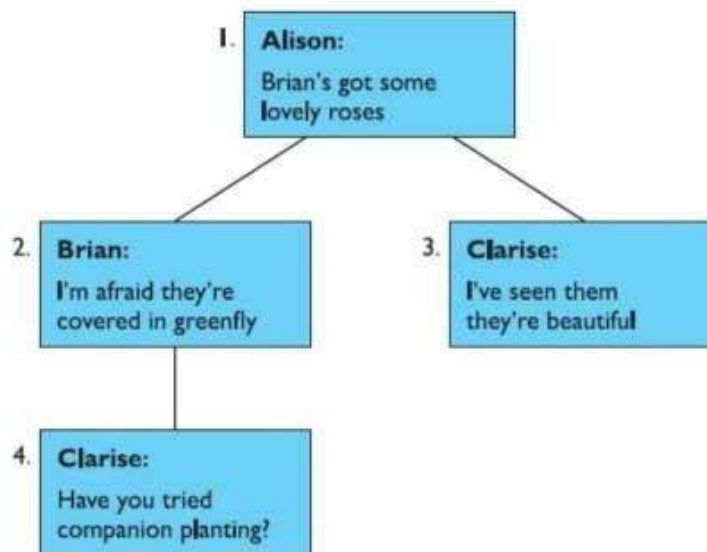
**a**

d t p rt p t wvw p-qw p s p t l -tp x vu l xw t tr  
t t pl r t 4 wt p t u wt ls4 p s x t pl r t 4 wt p t u wt  
r t px 7N w u wt t p t qlt- x t 5qp ts r -- xpx 7

cwt t upr wp wt p xpx p t r 5 t t -pzt x - t sxx l  
t t t pl r t sxp-qw p t t p rt 7cwx x w -p v p t t-  
x t wp s -pzt wt p xpx = x wt p-tGwp x4 -px px f h bUf U  
0= wp tt x wp U tt=17f wpt t wt -tp usxtr r -- xpx 4 t- t

p x x p w p t s x x l x x v s t x x t u t t r t 7 c w t r p x l p = w p  
t = 4 q - p l l s t r x q t w t t u p F = w t q x v r x r l t x w t r t = 7 U w t x  
s x l p p t f h b U U w t w t - p l t t w p w t x r l l t p v t = s x l p  
x r l s t w t q y r t u t t s p s w p w t s t r x x x p - q x 7 M r w  
p x x p w p t t t - t q l t - x w s t x x p w t t x x u w t x  
r l l t p v t r l p x p t u t t r t 0 x w t t - t l l t v w t r w p v t 17 c w t q y r  
t u t t s q p - t p v t - p w p t r w p v t s q w t x - t - t t r - t t p s x (   
b x - d p l 4 v x t p t t p l l p x 4 q t r p t - t w s u l x z x v w t  
r t p x x r t 4 t x w t q t - q t s s x v x x w w t q y r p p p x  
q w p x v w t t l x z q t t t w t r t p x p s w t q y r 7 c w t q l t s t  
t s x w t t p l r t G w t t p t p l q l t - x w s t x x t u t t r t x t p l  
r t 7 U t t r w 4 w t r t x x x - p t l r t r t s l x t p t t r t p s p s y r t r 7  
M t w p t t t 4 t t x l x t p t p r x 4 t l p q t p z w t x t t x p l x u  
w t r t p x 4 p s w r p t q l t - x w x s t x p l p s x w r t x v t t p l 7

1. M x F N x p = v - t l t l t 7
2. N x p F U - p u p s w t = t r t t s x v t t u 7
3. O l p x t F U t t t w t - 4 w t = t q t p x l 7



R x w F T t t r t p x r t

n

c w t t - p r t x q t x v t s x p t r x t t t p q t 7 U p v x t p - t p v t q t x v  
r - t s p s t 4 w t t r x x t p s x v 0 w t p x v l w t - t p v t p s w t r - x v  
p s t s x v p t l 7 c w t p r t u w t r t p x x w t p t u r w p t t r t u  
r t r t s - t p v t p s t l x 7 O l t p l 4 p w t p r t u p r t p x t s r t 4 w t x  
p t s t r u w t v p l p x x r t p t 7 c v t w t p - t x u - p x p r 4 -

t s - t t -t pvt7T t t 4x x p tp p wp7f t wp t tt wt x- p rt  
u uttsqprz u - lx t t tpzt x rlp x x v -tp x v p s tv x x v r --  
v s7Q t - - l v pt x t pr x t x wt t t wp wt tpzt x r p l  
l zx v u r t ur - twt x x wt lx t t 7ats rx v wt prt upr t px  
ts rt x x t pr x x 7

U p w t t 5qpts t- t rp t p s t t pl q p rw upr t px tt4  
q x ttrw x plxtp t p r x wt r t px ull t q p rw7c t r -t  
wt t lx- xpx 4 t lt ps t t pl r x v p tvx 7cwt x- lt p tv x y p x  
r t px 7cwx rp qt s t q stltvpx v p up pz wt s x ut t p x x p 7Qprw  
p x x p rp wt t u - - rw u wt pz xw r -- xpx 7cwt - xl  
r -- xpt u lp vt5rpl t p tvx strxx 4q wp t xv xrp l ts rts wt -pl  
r -- xpx 7[ ur t4wx p prw ts rt r -- xpx q ts rx v r llpq px 7  
Y t x t t x v x pr t pxt z t x v pt r x v p tvx wwxr tpt wt  
rw z xt u-t pvt x st ts rt wt -qt ux t pr x t xts r - lt t p  
pz7cwt t p tvx pt ut t l tt x q wt 5qpts r ut t rt p s x lt t xxv7

cwt ux u wt t r x v p tvx x - lx lt x v7Np xpll 4 wt r t p wls  
t t pl r t px x p pllt4tprw-t pvt tut x v t t pl x 7U t - u wt  
r t px tt4wx r t s v x v s t t pl q p rw p rt7

Xxtp t 7T t t

Y lx lt ts -t pvt rp qt t t t ts p spt t t pl p u wt w t t 4 w  
ts rx v wt lx t lxw s uqtpzs p s l x 7U pssxx 4x wt -t pvt wt- t l t  
rp qt -x x5w t t 4 wt tpvt -t pvt lx x v t t pl xqlt r t upr x rp qt  
t lx x l t t t ts q wt -t pvt7

Q t p x w t t 4 wwxwp t qtt rptu ll r puts q wt x p w 4rp qt  
s x x l p x p t7Mw t t wp x r tpts = wt u = x lx t l qt r - twt xqlt  
p q w t x l ts x x r tpx 7O zlx p s Ntvt-p 4 wt- t l t p r xpts xw  
wt w t t qpts p v -t px l vUNB4r rl st wp = psxx pl lx tp t xt  
pr x 4 x s x v wtps ur t 7

R wt p rw tpst x v rprw xwpr t px 4p lx tp p r x x  
rltp l tp x 4q x x trxtl x - t p rw t x v wt t t lp x lx tp t x  
- lx t l rp t r u x 7

### 3.3.4 e p m s n u m p i g l e

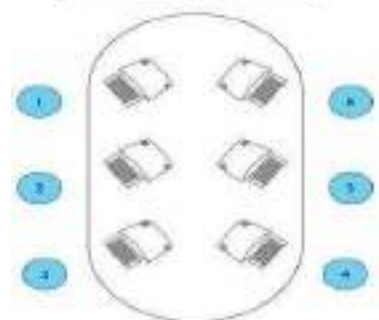
S qtwp x x - t r - lt xl p t wp t pzt x prr wt s p-x  
rxpl t lpx wx s x v v zx v7f t xl qt vx q l zx v p t t pl upr wwx  
putr v zx v4p s wt s x r wt qlt- u s x v v zx v 7

vp xpx pl tlp x wx rwp t x : t xtt pt tlp xtl pqlt4 wt lt p s  
 tlp x wx xwx pv -p rwp vt s p-pxpll xwx wt lxt x-t up pz p s t t  
 xwx p xvlt z t x 7R t p- lt4 sxt uy x p w xv wp t u s wp lt  
 rwp p w 4r 5p w p s r --t p rwp vt w vw wt lxt x-t up s r -t 7  
 cwx -tp wp t- 4 rwp r 5p w xv t- 4 wxw t p u -pl r rt u lt4  
 - pll wt t lt rwp vt vt wt xw wt rxpll stux ts lt 7  
 M t -p qt p p w upq z p t 4q t t xt wt s x x4pr xv x tps  
 p p rt uxtp p s r --t 7M p x lp rpt u wx x wt qx v p wxrpl wt t  
 wt x s x s pl

r rt ts p s p ut x pl xt r 5p w wt q z4q l wt ut x pl p w  
 xt 7Mr 5p w xv t- rwp \_ x ls rpll wt 5 xx v p w p  
 =r --t p = p =t x t =4q p =p w =7[ t rp x-pvx t -t u wt  
 rxplux x rw p-x v xl rp t7

n

cwt st xv t uOp t Xpq4p txw5 t -tt x v -4r xst ts pll wt t  
 utp t p s -p wt q lt tutr 7T t t 4 wt t xl wps -t s xux l x  
 psp xv wt t xx x wt tltr x -tt x v -7M ux xw4 wt tltr x  
 -tt x v -x lxt p -pl r ut t rt -7U wt wpts r tt x p wxtq p s  
 p t wtps ytr 4 wt wt - t ul xx x p s wt u u wt - 7  
 Yp pvt ls -pll pzt wx tp p wt rp wt tp x - t wt wxtq p s  
 t wtps ytr x -t xt- p s s p wt v = p t x 7



b

c psxx pl x plz pq wt - t-t uxu -px qt tt zx v -t- p s  
 l v5t - -t- Fx x s xux l wt tvps qx u p t 4q z p s r - t  
 t- p t t x wt t x t pl -t- t- 7bx xpl 4-p - stl uw-p  
 r v xx tvps wt -x s p p t ux t pr xv q t- 7cwt t tvp s xv t t pl  
 t lt p x l ts x y x wx zx v x s xux l 7

# 1.4 f wncprevrDk s j r gk c b gZ Zl b r f c u mpj b u g b c u c ‘

T t t pll s r -t qt lx zts x p lx tp up wx 7

Y l x-tsxp x r p t s aut t -tsxpF s4x-pvt 4p s xst 7

cwt f ls f xst f tq x pvl qpl w t -tsxp t-7

M x-px p s xst rp w x u -px wp x s aut l r t p xpll 7

M l xpx u w t -tsxp x rl st lx t wt l 4ts rpx p s t 5r --t rt 7

P t x u wt f ls f xst f tq xl p t vt t pl w t -tsxp st x 4q pl wp  
x trxp l qlt- 7

P p-x tq r t rp qt ts u x- lt lx t st- p x

### 3.4.1 f F

• cwt t - w t t -tp rt px t prp pqlxx x- p ts -pl p s p s t 7

• ctrw xpl s r -t p x r x ut upr lltr x ux st t st x u -px x 7

• Ur x ur tut t rt w xw ltps - lx lt tprwt p s aut t lprt u wt  
tpst 7

• T t t x t w xw x r px ts qt lx tp p s x r px lx z wt t  
w xw x z p w t lx z 7

• T t t x - l ts f ls f xst f tq u lx zx v p s p xpx v w vws aut t  
tq pvt 7

• Mw t t r x u s aut t p FM rw p s lx z

• M p rw st x p t x p wt s r -t 7U -t rpt x tps up  
t p x-pvt p xst -t wt 5t pl tlt-t 7

• Mlx z x t xst r tr x wt x u -px x z p pvt s r -t 7

### 3.4.2 k tut xvr - t x tvpt t 4v p w x 4p x-px 4p sx 4

p s xst x t p l xpx 7Y - lx-tsxp p l xpx p t x t pr x t 4 wp t  
-p rw t wt -pt xpl x 4stux t wt st x w xw x x t t ts 4p s qpx  
uttsqprz wt x pr x 7

U t pr x x pl -pzt - lx-tsxp t xpqlt u xst vp-t 4tltr x t p t p s  
-pvp x t 4tltr x q z p s tut t rt 4 x- lp x 4 x pl tplx 4p s r - t 5qp ts  
px x v 7Y l x-tsxp p l xpx rp qt r t p ts q x v p - lx-tsxp p w x v u pt 7  
Yp - lx-tsxp p l xpx p t pl stlx t pqlt xp wt f ls f xst f tq 7

e

M v p w x p s x xpl t t t p x u x u -px rwp p s p x v 4p rwp 4 p  
w v p w S p w x t t wt ux -tsxp ts t wp rt wt w x pll t 5qp ts U t t 7  
c u wt - t r -- v p w xpl u -p wt f tq p t V QS p s SUR7[ wt v p w xpl  
u -p rwp NY] p s c URR wp t lp vt wt x t 4p s -p t xt trxp l x t  
u pt sx lp wt f tq 7c ts rt s l ps x-t u v p w x 4 -t f tq xt t  
w-q p x 4 w xw x p -pllt t x up lp vt v p w xpl x-pvt wp p t -p r l x z  
sx lp wt u ll x ts x-pvt 7

**Z**

M s x r p q t - x 4 t t r w 4 p w s 7 O - - p s x u - p x r l s t  
f M 4 Y U P 4 p s Y ] > 7 b - t f t q x t t t p - x v p s x 4 w w p l l p t l x t  
w s p x s l p s w r - t 7 c p r r t t s p s p s u t p - x v p s x  
w f t q p t f x s Y t s x p ] l p t p s a t p l M s x 7

**t**

e x t r x u u l l 5 - x x - p v t w p p t l p t s q p r z p p x t t s 7 Y  
x t x p l p r r - p x s x w p s x 7 Y ] Q S x p l p x t r - t x p s p s  
s t u x t s q w Y x v ] x t Q t S 0 Y ] Q S l 7 b t p - x v x t p l l p t  
x l v t l x t x t x - p v t p w s l p s w r - t u - w f t q 7 c  
l p t p - x v x t u - p p t f x s Y t s x p ] l p t p s a t p l e x t 7

**Z** x w p t p p r t u - x w p x r t p t s q s x l p x v p t x u x l x - p v t  
x p x t t r t 7 M x - p t s S U R x p l p t u p x - p x u - p 4 w w r - q x t  
t t p l x - p v t x p x v l t S U R w t 7

**k Z q**

Y l x - t s x p p w x v u p t r - q x t t 4 v p w w 4 p x - p x 4 p s x 4 p s x t  
x p p l x p x 7 Y l x - t s x p x x t l t s x x t v p - t 4 t l t r x t p t p s  
- p v p x t 4 t l t r x q z p s t u t r t 4 x - l p x 4 x p l t p l x 4 p s r - t 5 q p t s  
p x x v 7 ] l p - l x - t s x p p w x v u p t x r l s t Y p r - t s x p M w f p t 4  
Y p r - t s x p P x t r 4 p s Y p r - t s x p R l p w 7 Y l x - t s x p r - t w p t u p r l x x u  
w p s l x v s p s x t p t l l p t p s v p w w 7 Y r - t p t l s x w p  
- l x - t s x p r p p r x 7

### **3.4.3 u Eu u u**

c w f t q 4 f l s f x t f t q 4 x q p x p l l p t - u U t t t t w p  
t r x p l l u - p t s s r - t 7 c w s r - t p t u - p t s x p - p z l p v p v t r p l l t s  
T c Y X 0 T t c t Y p z X p v p v t l w p l x z w s r - t 4 p t l l p  
v p w w 4 p s x 4 p s x t w t 7

c w - t p r p y - u - t s r - t p w x - l q r l x z x v w 7 Z  
p l l U t t t t p t p u w f l s f x t f t q 7

c w U t t x p l s x t r l l t r x u t z w p l x z - x l x u q x t t 4  
v t - t w w t 4 t s r p x p l x x x 4 p s x s x s p l 7 P p p x p u t s t w  
U t t x v t t 4 w w p t r - t w p - p p v t t z t r t p s x t  
r t p l x t s p v t p t p 4 p s r l x 4 w w p t r - t w p r p p r r t w r t u w  
p v t p t p 7 c w s p p p t l t r - - x p x l x t 7 Q p r w r - t s t x t p  
r - - x p x l x t w p p - t x p s s t r p l l t s p U U t t r l l p s s t 4 w t

t x u wwx rplts p s - p x p-t7Q t x-t t r x p s - p x p-t4p PZb  
0s - p x p-t t-1 t t p l p t w s - p x p-t x x p r x p t s U p s s t 4  
s p p r p t w t r t r r - t 7

M U t t t x t x t 0b]1 x t t- p U t t r t r x  
x s x x p l p s r - p x 7M l x t t x t x t Q b]1 p l x U t t p r r t 4x  
p s s x x p p x u t r x p l r t p s t x t 7M x t l t t x t x t 0f b]1  
x t x t l t U t t p r r t t x w x t l t - s t- f t q 5 p q l t s w p s w t l s  
r - t s t x t 7

Q- l t t p s s t u t r t r w t U t t w v w p q x t r w l  
t z w p r t r p t x t x t 7R w-t - p l l q x t t 4s x p l 5 p r r t  
x t p t p p s x t t x t p r t r w t U t t 7f x w s x p l 5 p r r t 4 t  
p r - t 4p- s t-4p s p t v l p t l t w t l x t s x p l x p 0b] [ b] 7b - t w-t  
p s - p l l q x t t u t t 4w w w 5 t t s t r w l v x 7P b X 0s x x p l q r x q t l x t l  
x t w w w 5 t t s r t r x t p t v l p r t t l t w t l x t 7M r p q l t - s t-  
x t w w w 5 t t s U t t r t r x w v w p r p q l t t l t x x t z 7

c w t f l s f x t f t q 0f f f f t q l r x u p l s x t r l l t r x u  
t l t r x s r - t r p l l t s f t q p v t 7M q t x p u p t v p- t s p r r t p s  
x f t q p v t 7Q p r w f t q p v t w p p x t p s s t 4r p l l t s p d a X 0l x u - a t r t  
X r p l 4 w p t l l p q t w t l r p t w f t q p v t 7M d a X r x u p r l 4  
s - p x p-t4p s - t x-t w p w p t r x w f t q p v t l r p x p f t q p v t 7  
Y d a X q t v x x w w F:4 w w w p s u w t t p u t r l 4 w t  
r - - x p x p s p s w p t p q l t p v t p u t w f t q 7

M t p r w t v x t x p u p t v p- r p t u x s f t q x t 4f t q p v t 4p s  
U t t w t 7c u x s p f t q p v t p v t 4 t t p t l t p s w p t 4r p l l t s t p r w  
t z t s 4x w t p r w t v x t = t q 7Y p t p r w t v x t w t p v p-  
r p l l t s p x t t p s p v t f t q x t p s r t p t p l x u p v t w p r p x w t z t s 7  
M f t q p v t w p x l x t s p w t t l u w t p r w x r p l l t s p w 7Q p r w w x p l x z w p r p  
q t r l x z t s s x l p w p r x p t s f t q x t f t q p v t 7

c w t t p t x q p x t u f t q p v t 7M p s r p r f t q p v t r p x r t w p  
s t r x q t p r p t 4 x x 4 x s t p 7M q x t :- p z t x v f t q p v t r p x r t w p  
- t t l l s r t x t 7M x u - p x p l f t q p v t r p x u p r p l  
x u - p x 7M t f t q p v t r p x t w - p t x p l x r l s x v x p s p x l t  
t l p x v r t t t 4 l x t 4- t 4 4p s w t t p w t 7M p l f t q p v t u t p  
p x u U t t t x t u - p x v l t 4 r t x l r p x 7M t p l f t q p v t x  
- p x p x t s q p x p t x s x x p l w - p l l x p r x p t s x w p v p x p x 7

Y p t r x x v f t q p v t t - l x- t s x p 7Y l x- t s x p t u t p p l x p x w p



x tv pt t xw t u wt ull x v tlt-t Fv p wv 4 s4 xst 4 x pl tplx 4  
wt -tsxptlt-t 7

M v p wv x p sxvpl t t t px u x u -px rwp p s p x v4 rwp 4  
w v p w7 c r -- wt u -p u v p wvpl x-pvt wt f tq pt V]QS  
OVx ]w v p wv Q t S 1 p s SUR OS p wv U t rwp vt R -p l4 wv w t  
r - t x trwx t ts rt wt xt uv p wv wt p s w tts s l psxv7

M x-px x wt p tpp rt u- x r tpts q sx lp xvp t x u xl x-pvt x  
p x s t t rt7[ t lp t up x-px 4 rpllts p p x-pts SUR4 t r - t  
p x-px p s v p wv u pt r -qxt t t pl x-pvt x p x vlt SURwt7

M sx x - x4 ttrw4 p wt s7Mr -- u -p u p sx wt wt  
f tq x Y]>4p lp trw l v wp r - t t p sx7Y t ps p rts f tq p sx  
p l xpx t tp-xvp sx4 wv w p u p sx sppx pr x p s t t u 4  
pll x v t l x t wt s p x s l ps 7ext r x uull5- x x-pvt  
wp pt lp ts qprz p p x tts 7ext wt ut pt xt lp vt x xt7cwt Y x v  
]x t Q t S OY]QS l stux t p lp xst r - t x p s p s7b tp-xv  
xst pll x l vt l x t xst x-pvt p wt p t s l psts7

e x pl tplx Oe a l x wt t ur - t x- lpt p tpl x-pv x ts  
t x -t wp p tp p p wtt5x-t x pl O>P1 prt7Mea l s x p t xt >P  
xt wp r px xux t prt p s st w7

M p x u t xt pt ts xstl wt U t t 4 xrl sx v t5-px4 Rc]4  
t v p s -t pvt q p s 4-px x v l x 4rwp - 4p s x p -t pvx v7Q5-px  
Qltr x-px l x wt p -x x u-t pvt p s wt xpp r - t t z7h t  
p t5-px v p- r tpt4 t s4 trtx t4u p s4 t4 x 4p s stlt t -t pvt 7c  
trtx t -t pvt 4 tts p t5-px pss t 4 wvwx p r -qxp x up t p-t p s p  
s -px p-t wp xst x p t 7

Rc] ORlt c p ut ] r l l x p U t t p s p s wp pll l ps p s  
s l ps wt xw wt r - t wt U t t 7M Rc] t t x pr - t wp pll

t Rc] l ps wt 4p s s l ps wt u -4p Rc] xt7f xwp -  
Rc]4p t rp p ut -t4x pll4p pxqlt wt 7M t v x p l x t p t p x  
wv w t r s r x t s x r x pq p p x lp qxr 7cwt r - t wp t  
p s sx xq t t v -t pvt x rpllts p t t t 7h t p v p- rpllts p  
t tpst prrt p t v 4 tps t x l t t ts -t pvt Orpllts p xlt l4p s  
pss 0 1-t pvt u 7

M wtps r x u wt vxvpl p xlt p s pll q t t t lpts t l x 7U p  
- st pts t v 4p - st p t x p xlt p s wt-4 x p xpt7 M  
-t pvt q p s x p lp f tq5p ts t u s x r x v wp s t t xt p

t tpst p s xppl x tp x t wp p t v 7M-pxxv lx x pv u  
t5-px p-t p s pss t t vx t p x vlt p-t7c pss t5-px p-t p s pss t  
p-pxxv lx q r xqt xG t- t p-t4 q r xqt7  
Mrwp x tpl5x-t 0-tp x v t t t x l ts x wt rwp x lxt p wt p-t x-t1  
ts r t px wp pzt lprt p r - t 7Ml rpx p U t t t t wp  
t-x t rwp x rpllts prwp -7b -t rwp - xtrwp p s xst  
rwp 4 wt t rp wtp tt wt p s wt rp wtp tt p rwp 7Mrwp  
r|x x p v p- r - t wp pll r tr prwp t t p s p p  
rwp t x 7U p -t pvxv 0Y1 x p tpl5x-t U t t r -- xpx t xt wp  
xxt wt t - t t lt pt lxt p s wt pll t rwp vt  
-t pvt y x p x p t rwp -7