

$$x^2, a=1 \quad f(x) = x^2 - 4x \quad \text{I}$$

$$, a=-1 \quad g(x) = -x^2 + 3x + 4 \quad \text{II}$$

$$g(0) > f(0) \quad g(0) = 4, f(0) = 0 :$$

$$g(x) = -x^2 + 3x + 4 \quad \text{II}, f(x) = x^2 - 4x \quad \text{I} :$$

$$y = 4, x = 3$$

$$(3, 4) \quad f(3) = 3^2 - 4 \cdot 3 = -3$$

$$(3, 4) \quad g(3) = -3^2 + 3 \cdot 3 + 4 = 4$$

$$g(x) = -x^2 + 3x + 4 \quad (3, 4) :$$

$$\begin{cases} y = x^2 - 4x \\ y = -x^2 + 3x + 4 \end{cases}$$

$$x^2 - 4x = -x^2 + 3x + 4$$

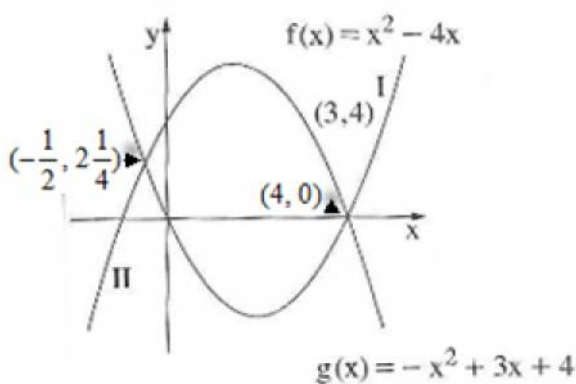
$$2x^2 - 7x - 4 = 0$$

$$x_{1,2} = \frac{-(-7) \pm \sqrt{(-7)^2 - 4 \cdot 2 \cdot (-4)}}{2 \cdot 2}$$

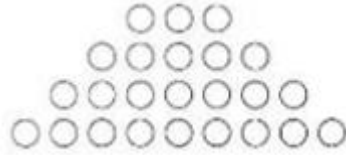
$$x_{1,2} = \frac{7 \pm 9}{4}$$

$$x_1 = \frac{7+9}{4} = \frac{16}{4} = 4 \rightarrow y = 4^2 - 4 \cdot 4 = 0 \rightarrow \boxed{(4, 0)}$$

$$x_2 = \frac{7-9}{4} = \frac{-2}{4} = -\frac{1}{2} \rightarrow y = -\left(-\frac{1}{2}\right)^2 + 3 \cdot \left(-\frac{1}{2}\right) + 4 = 2\frac{1}{4} \rightarrow \boxed{\left(-\frac{1}{2}, 2\frac{1}{4}\right)}$$



$$\left(-\frac{1}{2}, 2\frac{1}{4}\right), (4, 0) :$$



$d = 2$ - $a_1 = 3$: , $+2$ 3

$a_n = a_1 + (n-1)d$:

a_8 , 8 -

$a_8 = 3 + (8-1) \cdot 2$

$a_8 = 3 + 7 \cdot 2$

$a_8 = 3 + 14$

$a_8 = 17$

17 :

1,

S_8 ,

$S_n = \frac{n(a_1 + a_n)}{2}$

$S_8 = \frac{8(3+17)}{2}$

$S_8 = 4 \cdot 20$

$S_8 = 80$

80 :

$$S_n = \frac{n[2a_1 + d(n-1)]}{2}$$

$$255 = \frac{n[2 \cdot 3 + 2 \cdot (n-1)]}{2} \quad / \cdot 2$$

$$510 = n[6 + 2n - 2]$$

$$510 = n \cdot (4 + 2n)$$

$$510 = 4n + 2n^2$$

$$0 = 2n^2 + 4n - 510$$

$$n_{1,2} = \frac{-4 \pm \sqrt{4^2 - 4 \cdot 2 \cdot (-510)}}{2 \cdot 2}$$

$$n_{1,2} = \frac{-4 \pm 64}{4}$$

$$n_1 = \frac{-4 + 64}{4} = \frac{60}{4} = 15$$

$$n_2 = \frac{-4 - 64}{4} = \frac{-68}{4} = -17$$

$$\boxed{n = 15} \quad (n > 0)$$

15 :

$$M_t = M_0 \cdot q^t$$

$q = \frac{100 - P}{100}$: , () P
 .t .q ()
 . t - M_t , - M_0

. 70°C 10 90°C

M_t	M_0	q	t
70°C	90°C	?	10

$$70 = 90 \cdot q^{10} \quad / : 90$$

$$\frac{70}{90} = q^{10}$$

$$0.7748 = q^{10}$$

$$q = \sqrt[10]{0.7748}$$

$$\boxed{q \approx 0.9752}$$

$$M_1 = 90 \cdot 0.9752^1$$

$$\boxed{M_1 = 87.77^\circ\text{C}}$$

. 87.77°C

. 15

M_t	M_0	q	t
?	90°C	0.9752	15

$$M_{15} = 90 \cdot 0.9752^{15}$$

$$\boxed{M_{15} = 61.75^\circ\text{C}}$$

. 61.75°C ,

15 ,

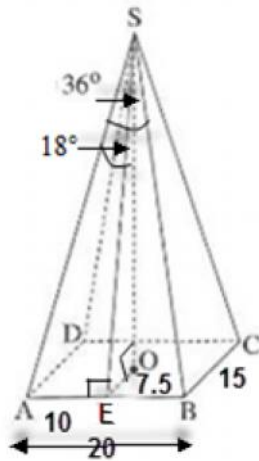
. 60 ,

M_t	M_0	q	t
?	90°C	0.9752	60

$$M_{60} = 90 \cdot 0.9752^{60}$$

$$\boxed{M_{60} = 19.95^\circ\text{C}}$$

. 19.95°C ,



OE
(O)

$$OE = \frac{BC}{2} = \frac{15}{2} = 7.5, \quad AE = \frac{AB}{2} = \frac{20}{2} = 10$$

(ΔSAB) AB

$$\angle ASE = \frac{36^\circ}{2} = 18^\circ : \quad \angle ASB = 36^\circ$$

ΔSEA

$$\tan \angle ASE = \frac{AE}{SE}$$

$$\tan 18^\circ = \frac{10}{SE}$$

$$SE \tan 18^\circ = 10 \quad /: \tan 18^\circ$$

$$SE = \frac{10}{\tan 18^\circ}$$

$$SE = " 30.78$$

$$" 30.78 \quad SE :$$

ΔSOE

$$(SE)^2 = (OE)^2 + (SO)^2$$

$$30.78^2 = 7.5^2 + (SO)^2$$

$$SO = \sqrt{891.2}$$

$$SO = " 29.85$$

$$" 29.85 :$$

SE

ΔSEO

$$\tan \angle SEO = \frac{SO}{OE}$$

$$\tan \angle SEO = \frac{29.85}{7.5}$$

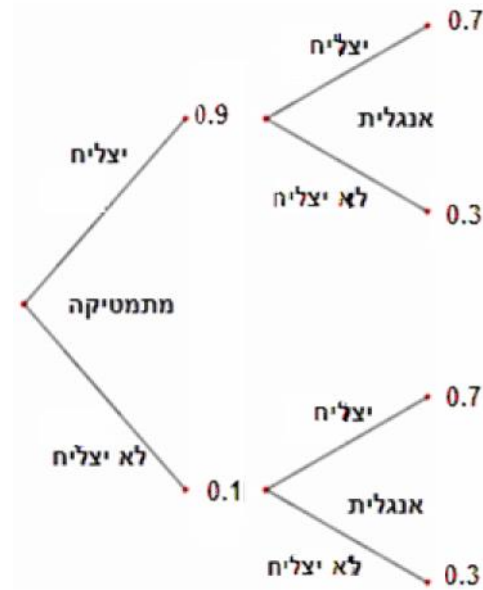
$$\boxed{\angle SEO = 75.9^\circ}$$

$$. 75.9^\circ$$

$$SE :$$

. 0.1
. 0.3

,0.9
,0.7



$P = 0.9 \cdot 0.7 = 0.63$

.0.63 :

$P = 0.9 \cdot 0.3 + 0.1 \cdot 0.7 = 0.34$

.0.34 :

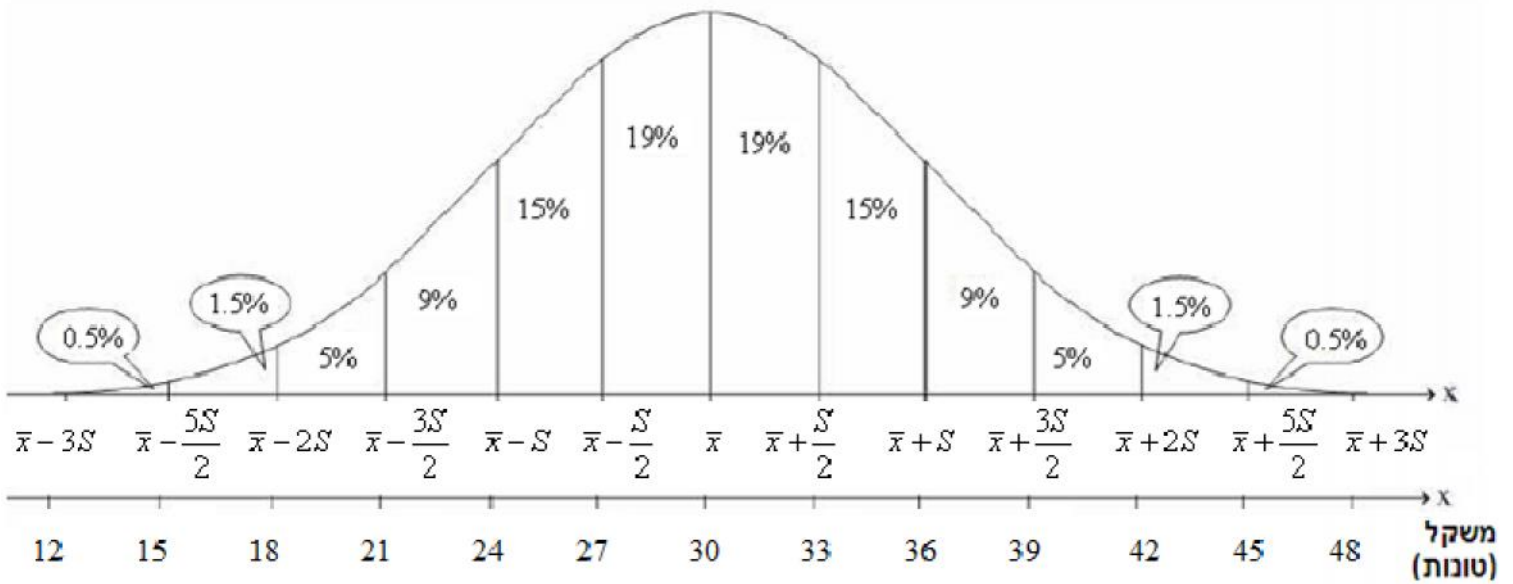
$P = 0.1 \cdot 0.7 + 0.9 \cdot 0.3 + 0.9 \cdot 0.7 = 0.97$

$P = 1 - 0.1 \cdot 0.3 = 1 - 0.03 = 0.97$

.0.97 :

$\bar{x} = 30$ $s = 6$

$\frac{6}{2} = 3$ 6



18

$0.5\% + 1.5\% = 2\%$

$\frac{2}{100} = 0.02$

0.02 18 -

42

$0.5\% + 1.5\% = 2\%$

$\frac{2}{100} = 0.02$

0.02 42 -

$42 - 18$

$(1 - (0.02 + 0.02) = 0.96)$ $100\% - (2\% + 2\%) = 96\%$

$\frac{96}{100} = 0.96$

0.96