

$$y = -x^2 + 4x + 5$$

$y = 0$ $x =$

$$0 = -x^2 + 4x + 5$$

$$x_{1,2} = \frac{-4 \pm 6}{2 \cdot (-1)}$$

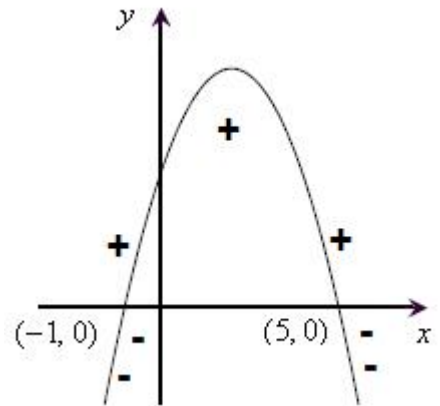
$$x_1 = \frac{-4 + 6}{-2} = \frac{2}{-2} = -1 \rightarrow \boxed{(-1, 0)}$$

$$x_2 = \frac{-4 - 6}{-2} = \frac{-10}{-2} = 5 \rightarrow \boxed{(5, 0)}$$

$(5, 0)$, $(-1, 0)$:

$a = -1 < 0$,

:



x

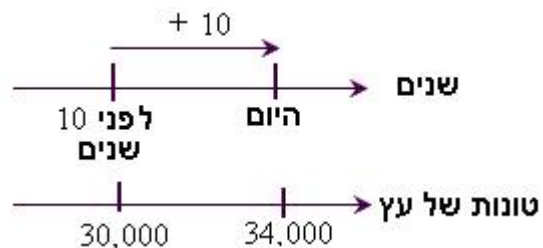
$x = 61$:

$x = 4$:

$-1 < x < 5$:

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

.t .q ()
- M_t , - M_0



$$34,000 = 30,000 \cdot a^{10} \quad /: 30,000$$

$$\Leftrightarrow \frac{34,000}{30,000} = a^{10}$$

$$\Leftrightarrow 1.133 = a^{10}$$

$$\Leftrightarrow a = 1.01259$$

P ,

$$a = 1 + \frac{P}{100}$$

$$1.01259 = 1 + \frac{P}{100}$$

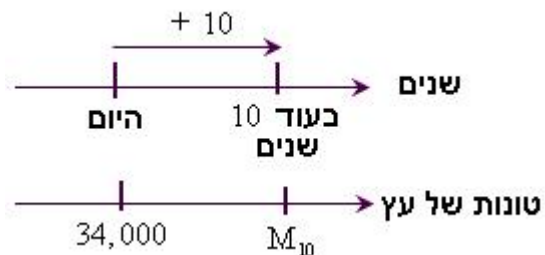
$$0.01259 = \frac{P}{100} \quad / \cdot 100$$

$$0.01259 \cdot 100 = P$$

$$\boxed{P = 1.259\%}$$

.1.259% - :

$t = 10, M_0 = 34,000, a = 1.01259$: - 10 , .



$$M_{10} = 34,000 \cdot 1.01259^{10}$$

$$\Leftrightarrow M_{10} = 38,531$$

. 38,531 10 :

3,500

$$a_1 = 3,500$$

40 -

$$d = 40$$

: 12 -

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

$$a_{12} = 3,500 + (12-1) \cdot 40$$

$$a_{12} = 3,500 + 11 \cdot 40$$

$$a_{12} = 3,940$$

. 3,940

12 -

:

,

12

$$S_{12} :$$

:

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

$$S_{12} = \frac{12}{2} \cdot (2 \cdot 3,500 + (12-1) \cdot 40)$$

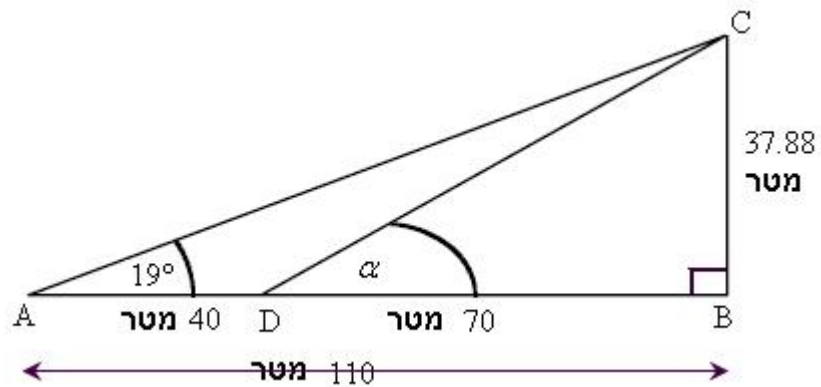
$$S_{12} = 6 \cdot (7,000 + 11 \cdot 40)$$

$$\boxed{S_{12} = 44,640}$$

. 44,640

12

:



.BC

ΔABC

$$\tan \angle A = \frac{BC}{AB}$$

$$\tan 19^\circ = \frac{BC}{110}$$

$$110 \cdot \tan 19^\circ = BC$$

$$BC = " 37.88$$

:

BD

$$BD = AB - AD = 110 - 40 = 70$$

.CDB

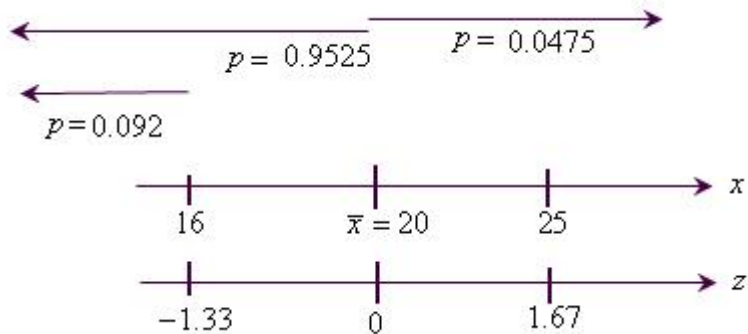
ΔCDB

$$\tan r = \frac{BC}{BD}$$

$$\tan r = \frac{37.88}{70}$$

$$\boxed{r = 28.42^\circ}$$

.28.42° CDB :



$s = 3, \bar{x} = 20 :$

$() x = 16$

$$z = \frac{x - \bar{x}}{s}$$

$$z = \frac{16 - 20}{3} = \frac{-4}{3} = -1.33$$

$p(z < -1.33) = 0.092 :$

$. 0.092 \quad 16 - \quad :$

$s = 3, \bar{x} = 20 :$

$() x = 25$

$$z = \frac{x - \bar{x}}{s}$$

$$z = \frac{25 - 20}{3} = \frac{5}{3} = 1.67$$

:

$p(z < 1.67) = 0.9525 \rightarrow p(z > 1.67) = 1 - 0.9525 = 0.0475$

$.0.0475 \quad 25 - \quad :$

$25 - \quad 16$

$p(16 < x < 25) = 0.9525 - 0.092 = 0.8605$

$. 0.8605 \quad :$

"	6000	5600	5200	(x)
80	b	a	10	(f)

$N = f_1 + f_2 + \dots + f_n :$

$80 = a + b + 10$

$a + b = 70$

$\cdot 5800$

$\bar{x} = \frac{x_1 f_1 + x_2 f_2 + \dots + x_n f_n}{N} :$

$5800 = \frac{5200 \cdot 10 + 5600 \cdot a + 6000 \cdot b}{80} \quad / \cdot 80$

$464,000 = 52,000 + 5600a + 6000b$

$412,000 = 5,600a + 6,000b \quad / : 100$

$4,120 = 56a + 60b$

:

$\begin{cases} a + b = 70 \rightarrow a = 70 - b \\ 4,120 = 56a + 60b \end{cases}$

$4,120 = 56(70 - b) + 60b$

$4,120 = 3,920 - 56b + 60b$

$200 = 4b \quad / : 4$

$b = 50 \rightarrow a = 70 - 50 = 20$

$\cdot 50$

6000 ,

"	6000	5600	5200	(x)
80	50	20	10	(f)

$p = \frac{50}{80} = 0.625$

$\cdot 0.625$