

$$f(x) = x^2 + 4x + 6$$

$$a = 1, \quad b = 4, \quad c = 6$$

$$x_k = -\frac{b}{2a}$$

x -

$$\left. \begin{aligned} x_k &= -\frac{4}{2 \cdot 1} = -2 \\ y_k &= (-2)^2 + 4(-2) + 6 = 2 \end{aligned} \right\} (-2, 2)$$

$$(-2, 2)$$

:

$$(-2, 2)$$

$$a = 1$$

x -

$$y = 0$$

x -

:

$$0 = x^2 + 4x + 6$$

$$x_{1,2} = \frac{-4 \pm \sqrt{-8}}{2}$$

x -

x -

:

2

, x

:

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

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

20,000 - 10 10,000

M_t	M_0	q	t
20,000	10,000	?	10

$20,000 = 10,000 \cdot q^{10} \quad /:10,000$
 $\frac{20,000}{10,000} = q^{10}$
 $2 = q^{10}$
 $q = \sqrt[10]{2}$
 $q = 1.07$

1.07

$1.07 = \frac{100+P}{100} \quad / \cdot 100$
 $\Leftrightarrow 107 = 100 + P$
 $\Leftrightarrow P = 7\%$

.7% -

5 14,025.52

M_t	M_0	q	t
?	10,000	1.07	5

$M_5 = 10,000 \cdot 1.07^5$
 $M_5 = 14,025.52$

14,025.52

5 :

20,000 - 10 10,000

100% ,2 ,

$2 = \frac{100+P}{100} \quad / \cdot 100 \rightarrow 200 = 100 + P \rightarrow P = 100\%$:

. 100% **(3)** :

, 7 - - .
 . $d = 7$,

. 105 7 -

. 105, 112, 119 :

. 7 - , - 105, 112, 119 :

. 994 , 7 - , - .

. $d = 7$ $a_n = 994$, , $a_1 = 105$, ,

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

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

$$994 = 105 + (n-1) \cdot 7$$

$$994 = 105 + 7n - 7$$

$$994 = 98 + 7n$$

$$896 = 7n$$

$$\boxed{n = 128}$$

. 7 - - 128 :

. S_{128} , 128 .

$$S_{128} = \frac{128[2 \cdot 105 + 7(128-1)]}{2}$$

$$S_{128} = 64 \cdot (210 + 7 \cdot 127)$$

$$S_{128} = 64 \cdot 1099$$

$$\boxed{S_{128} = 70,336}$$

. 70,336 :

BC = " 10 ,

. BD = " 8

" 2 - BC

ΔCBD

$$\sin \sphericalangle C = \frac{BD}{BC}$$

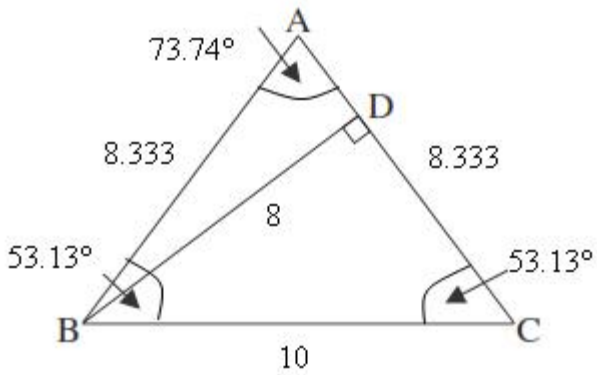
$$\sin \sphericalangle C = \frac{8}{10}$$

$$\boxed{\sphericalangle C = 53.13^\circ}$$

() $\sphericalangle C = \sphericalangle B = 53.13^\circ$

$$\sphericalangle A = 180^\circ - 53.13^\circ - 53.13^\circ = 73.74^\circ$$

. $\sphericalangle C = \sphericalangle B = 53.13^\circ$, $\sphericalangle A = 73.74^\circ$:



. AB

ΔABD

$$\sin \sphericalangle A = \frac{BD}{AB}$$

$$\sin 73.74^\circ = \frac{8}{AB}$$

$$AB \sin 73.74^\circ = 8$$

$$AB = \frac{8}{\sin 73.74^\circ}$$

$$\boxed{AB = 8.333}$$

. " 8.333 ABC :

. AC = AB = 8.333 , $S = \frac{AC \cdot BD}{2}$: ABC

$$S = \frac{8.333 \cdot 8}{2} = 33.33$$

. " 33.33 ABC :

$$1 - 0.6 = 0.4$$

$$, 60\% = 0.6$$

$$P = 0.6 \cdot 0.6 \cdot 0.6 = 0.216$$

$$. 0.216$$

$$P = 3 \cdot (0.6 \cdot 0.4 \cdot 0.4) = 0.288$$

$$. 0.288$$

$$1 -$$

$$.(\quad)$$

$$P(\text{at least 1 man student}) = 1 - 0.216 = 0.784$$

$$. 0.784$$

90	72	x_i
1	5	f_i

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

$$\bar{x} = \frac{72 \cdot 5 + 90 \cdot 1}{6}$$

$$\bar{x} = \frac{450}{6}$$

$$\boxed{\bar{x} = 75}$$

. 75

. 78 -

x	90	72	x_i
1	1	5	f_i

$$78 = \frac{72 \cdot 5 + 90 \cdot 1 + x \cdot 1}{7} \quad / \cdot 7$$

$$546 = 450 + x$$

$$\boxed{x = 96}$$

. 96

2

. 74 - 72 -

96	90	74	x_i
1	1	5	f_i

$$\bar{x} = \frac{74 \cdot 5 + 90 \cdot 1 + 96 \cdot 1}{7}$$

$$\bar{x} = \frac{556}{7}$$

$$\boxed{\bar{x} = 79.43}$$

. 79.43