

?

?

1.

78

310

(78-)

(77-)

4

(

5

7

).

$$2 \cdot 2 + 2 \cdot 3 + 74 \cdot 4 = 306,$$

2.

20

(
).

$$15 \cdot 3 = 45$$

$$15 \cdot 2 = 30, \quad t, t+1, t+2, t+3, t+4, t+5, \quad 30 \leq 15 + 6t \leq 45,$$

$$2\frac{1}{2} \leq t \leq 5.$$

$$t = 5,$$

3,

$$5, 6, 7, 8, 9, 10, \quad 3.$$

$$t = 3, \quad 6 \cdot 3 + 15 = 33,$$

$$3, 4, 5, 6, 7, 8$$

$$8, \quad 2$$

2

1

4

7

6

1

3

$$t = 3,$$

$$1 + 1 + 2 = 4,$$

3

$$t = 4,$$

$$6 \cdot 4 + 15 = 39,$$

9

$$4, 5, 6, 7, 8$$

9

$$-X31000, \quad -0X1031, \quad -11X301,$$

$$-330X10, \quad -3031X1, \quad -31131X,$$

X

5.

16

$$(\quad 3 \quad , \quad 0 \quad).$$

15

?

$$\frac{15 \cdot 14}{2} = 105,$$

$$105 \cdot 2 = 210 \quad (\quad , \quad 12 \quad).$$

14 ,
 198 ,
 14 , $14 \cdot 14 < 198$. -
 15 -
 14 , -
 13 12 , -
 212 . -
 14 $212 - 15 = 197$, -
 14 , $14 \cdot 14 < 197$. -
 14 -
 196 . 14 -
 15 14 -
 210 , 105 -
 $105 + 1 = 106$. -
 6. 5 ,
 5 , 0 , -
 1 ,
 2 .
 ?
 $\frac{5-4}{2} = 10$,
 $2, 4$ 5 . ,
 $20, 50$. ,
 $a, a+1, a+2, a+3, a+4,$
 $5a+10$. 20 ((-
 50), (-
 $)$,
 $5a+10 = 25, 30, 35, 40$ -
 45 , :

-) 3, 4, 5, 6, 7;
-) 4, 5, 6, 7, 8;
-) 5, 6, 7, 8, 9;
-) 6, 7, 8, 9, 10,
-) 7, 8, 9, 10, 11.

v , d
 s ,
 $5v + 2d + 4s$, $v + 2s$.
) (!).
) 6
 ($v = 2$ $s = 2$) :

	A	B	C	D	E	
A		5	1	1	1	8
B	0		1	1	5	7
C	1	1		2	2	6
D	1	1	2		1	5
E	1	0	2	1		4

6. (!)

7. 8 , 1
 , 0 () .
 $a_1 \geq a_2 \geq \dots \geq a_8$, -

$$a_1 - a_2 + a_3 - a_4 + a_5 - a_6 + a_7 - a_8 .$$

$$a_1 \leq 7 ,$$

$$S = a_1 - a_2 + a_3 - a_4 + a_5 - a_6 + a_7 - a_8$$

$$= a_1 - (a_2 - a_3) - (a_4 - a_5) - (a_6 - a_7) - a_8$$

$$\leq a_1 - a_8$$

$$\leq a_1 = 7 .$$

$$S = 7 , \quad a_1 = 7, a_2 = a_3, a_4 = a_5, a_6 = a_7, a_8 = 0 ,$$

$$a_1 + a_2 + a_3 + a_4 + a_5 + a_6 + a_7 + a_8 = 7 + 2(a_2 + a_4 + a_6)$$

$$, \dots \frac{8 \cdot 7}{2} = 28 . , -$$

11.

$k + 2016 = 3n(n-1)$.
 $(n-1)k > 2016$.
 $3n(n-1) > 2016 + \frac{2016}{n-1} = \frac{2016n}{n-1}$,
 $(n-1)^2 > 672$,
 $n \geq 27$.
 $k \leq 4(n-1)$,
 $3n(n-1) \leq 2016 + 4(n-1)$,
 $(3n-4)(n-1) \leq 2016$
 $n \leq 27$. , $27 \leq n \leq 27$,
 $n = 27$,
 $k = 3 \cdot 27 \cdot (27-1) - 2016 = 90$.

12.

3 , 0
 1 .
 1 . n ,

13.

n .

3 , 1 0 -

1. n .

14. -

. , -
1 , 0 .

. , -
1 .
?