

II ( )

9

-4

7  
6-7  
5-6  
4  
2-3  
1  
0

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( ) ,  
« + » .  
, , .  
, , .

1

$6^2$  ,  $1^2$   $3^2$  .  
 $7$  ,  $1^2$  .  
 $3 + 3 - 1 = 5^2$  ,  $1^2$  ,  
 $1^2$  ,  $5 + 1 = 6^2$  .

2

:  $a, b, c$  .  
 $a + b + c > 0, ab + bc + ca > 0, abc > 0$  . ,  $a > 0, b > 0, c > 0$  .  
 $7$

$abc > 0$  . ,  $a > 0, b = -x < 0, c = -y < 0$  .

$xy > (x + y)^2$  .  $0 > -xy + x^2 + y^2 = xy + (x + y)^2$  .  
:  $a > x + y, a < xy(x + y)^{-1}$  .

$w > 0 (u = a + b + c, v = ab + bc + ca, w = abc)$  . ,  $x^3 - ux^2 + vx - w, u, v,$   
 $x^3 = 0$  .

3

12,

18.

$$: \frac{28}{3}$$

$AP \perp BC$  in  $\triangle ABC$ .

$$AP = \sqrt{AB^2 - BP^2} = \sqrt{18^2 - 6^2} = 12\sqrt{2}$$

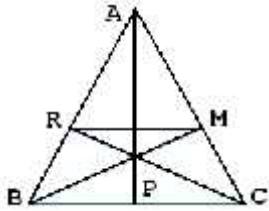
$$2S_{\triangle ABC} = BC \cdot AP = AC \cdot BM.$$

$$BM = \frac{BC \cdot AP}{AC} = \frac{12 \cdot 12\sqrt{2}}{18} = 8\sqrt{2}$$

$$AM = \sqrt{AB^2 - BM^2} = \sqrt{324 - 128} = 14$$

$$\frac{RM}{BC} = \frac{AM}{AC}$$

$$: RM = \frac{BC \cdot AM}{AC} = \frac{12 \cdot 14}{18} = \frac{28}{3}$$



$$\frac{4}{20}$$

70.

7

$a_1, a_2, \dots, a_{20}$

$a_1 < a_2 < \dots < a_{20}$ .

19

$$d_1 = a_2 - a_1, d_2 = a_3 - a_2, \dots, d_{19} = a_{20} - a_{19}$$

1,

2, . . .

$$(1+1+1)+(2+2+2)+(3+3+3)+(4+4+4)+(5+5+5)+(6+6+6)+7=70.$$

70,

$a_{20} - a_1 -$

70.

5

$8 \times 8,$

$1 \times 1.$

64

(

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"

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64

?

7

$$: 2^{16}$$

4

(

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$$4^8 = 2^{16}.$$