

Вариант 110201

1) Вычислите

$$\left(-\frac{7}{8} - 1\frac{1}{6}\right) \cdot 2,4 = -\left(\frac{7}{8} + \frac{7}{6}\right) \cdot 2,4 = -\frac{21+28}{24} \cdot \frac{24}{10} = -\frac{49}{10} = -4,9$$

2) Найдите значение $\frac{1,6 \cdot 10^2}{4 \cdot 10^{-2}} = \frac{160 \cdot 10^2}{4} = 4000$

3) $\frac{240 - 100\%}{x - 105\%} \quad x = \frac{240 \cdot 105}{100} = 252$

4) $A = \frac{U^2 t}{R}; \quad A = \frac{4^2 \cdot 18}{14} = \frac{4 \cdot 18}{2} = 63$

5) Найдите $\cos x, 180^\circ < x < 270^\circ, \sin x = -0,8$
 $\cos x = -\sqrt{1 - \sin^2 x} = -\sqrt{1 - (0,8)^2} = -\sqrt{0,36} = -0,6$

6) $90 \cdot 9 = 810$
 $810 : 100 = 8,1 \Rightarrow 9$

7) $x^2 + 8 = 6x$
 $x^2 - 6x + 8 = 0$
 $\begin{cases} x = 4 \\ x = 2 \end{cases} \Rightarrow \text{Отв. } 4$

8) 30°

9)

A	B	C	D
3	1	2	4

10) $6 + 5 + 9 = 20 \Rightarrow \frac{5}{20} = 0,25$

11) 16

12) $290 \cdot 13 + 200 = 3770 + 200 = 3970$
 $260 \cdot 13 + 400 = 3380 + 400 = \boxed{3780}$
 $300 \cdot 13 = 3900$

18) 14

19) 24624

20) $\begin{cases} 4z = 5c + 1u & /5 \\ 4c = 5z + 1u & /4 \end{cases} \Rightarrow \begin{cases} 20z = 25c + 5u \\ 28c = 20z + 4u \end{cases} \Rightarrow$
 $28c = 25c + 5u + 4u$
 $28c = 25c + 9u$
 $3c = 9u / :10 \Rightarrow 30c = 90u \Rightarrow 30$

13) $V_{\text{шар}} = \frac{4}{3} \pi R^3 H$


$H = 60 \text{ см}$

R в 2 раза \Rightarrow
 масса в 4 раза \Rightarrow

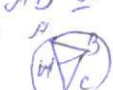
$\frac{60}{4} = 15$

14)

A	B	C	D
3	4	1	2

15)  $S_D = \frac{1}{2} a h$
 $10\sqrt{6} = \frac{1}{2} a \cdot 5$
 $a = 4\sqrt{6} \Rightarrow AM = 2\sqrt{6}$

$AB^2 = AM^2 + BM^2$
 $AB^2 = (2\sqrt{6})^2 + 5^2 = 24 + 25 = 49$
 $AB = 7$

16)  $AB = 15, H \in AB \Rightarrow AH = \sqrt{15^2 - 9^2} = 12$
 $AC = 24 \quad S_{\text{сер}} = 24 \cdot 9 = 456$

17)

A	B	C	D
3	1	2	4