

Varianta 88

III.

$$13. a) \begin{cases} a = \frac{-476}{238} = -2 \\ c = \frac{5}{9} \cdot \frac{9}{5} = 1 \end{cases} \Rightarrow a+c = -2+1 = -1 \in \mathbf{Z}.$$

$$b) b = \frac{\sqrt{4} - \sqrt{5} + \sqrt{5} - \sqrt{6} + \sqrt{6} - \sqrt{7} + \sqrt{7} - \sqrt{8} + \sqrt{8} - \sqrt{9}}{-1} = \frac{2-3}{-1} = 1 \Rightarrow a+b+c = 0.$$

$$14. a) \begin{cases} f(-1) = 5 \\ f(0) = 4 \end{cases} \Leftrightarrow \begin{cases} -a+b = 5 \\ b = 4 \end{cases} \Leftrightarrow \begin{cases} a = -1 \\ b = 4 \end{cases} \Rightarrow f(x) = -x+4.$$

$$b) AB = \sqrt{AC^2 + BC^2} = \sqrt{1+1} = \sqrt{2}, \text{ unde punctul } C(0;5).$$

$$c) f(x) = -x+4 \Leftrightarrow M(x; y) \in G_f; x = y \Rightarrow x = -x+4 \Leftrightarrow x = 2 \Rightarrow M(2;2).$$

$$15. b) r = 15 \text{ și } \frac{r}{3} = \frac{h}{4} = \frac{g}{5} \Rightarrow h = 20 \text{ cm.}$$

$$c) A_l = 1125\pi \text{ cm}^2.$$

$$d) \frac{VO'}{VO} = \frac{r}{R} \Leftrightarrow \frac{VO'}{VO} = \frac{1}{2} \Leftrightarrow \frac{VO-20}{VO} = \frac{1}{2} \Rightarrow VO = 40 \text{ cm. } V_{con} = 12000\pi \text{ cm}^3.$$