

Вежбање за контролни – други час

1. (29. збирка задатака)

$$\text{a) } 3 \cdot \left(-\frac{2}{3}\right)^2 - 3 : \left(-\frac{1}{2}\right)^2 + \left(\frac{2}{3}\right)^2 \cdot \frac{9}{2^2} =$$

$$\frac{3}{1} \cdot \frac{4}{9} - \frac{3}{1} : \frac{1}{4} + \frac{4}{9} \cdot \frac{9}{4} =$$

$$\frac{4}{3} - \frac{3}{1} \cdot \frac{4}{1} + 1 =$$

$$\frac{4}{3} - 12 + 1 =$$

$$\frac{4}{3} - \frac{11}{1} =$$

$$\frac{4}{3} - \frac{33}{3} =$$

$$-\frac{29}{3}$$

$$\text{б) } 12\sqrt{6} - \frac{12}{\sqrt{6}} =$$

$$12\sqrt{6} - \frac{12}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} =$$

$$12\sqrt{6} - \frac{12\sqrt{6}}{6} =$$

$$12\sqrt{6} - 2\sqrt{6} =$$

$$10\sqrt{6}$$

$$\sqrt{6} \cdot \sqrt{6} = \sqrt{6 \cdot 6} = \sqrt{36} = 6$$

$$\sqrt{3} \cdot \sqrt{3} = \sqrt{3 \cdot 3} = \sqrt{9} = 3$$

$$\text{в) } 7\sqrt{3} - \frac{9}{\sqrt{3}} =$$

$$7\sqrt{3} - \frac{9}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} =$$

$$7\sqrt{3} - \frac{9\sqrt{3}}{3} =$$

$$7\sqrt{3} - 3\sqrt{3} =$$

$$4\sqrt{3}$$

2. (165. збирка задатака)

$$\begin{aligned} \text{a) } \sqrt{50} + 2\sqrt{72} + \frac{1}{2}\sqrt{8} &= \\ 5\sqrt{2} + 2 \cdot 6\sqrt{2} + \frac{1}{2} \cdot 2\sqrt{2} &= \\ 5\sqrt{2} + 12\sqrt{2} + \frac{1}{2} \cdot \frac{2}{1}\sqrt{2} &= \\ 17\sqrt{2} + \sqrt{2} &= \\ 18\sqrt{2} \end{aligned}$$

$$\begin{aligned} \sqrt{50} &= \sqrt{25 \cdot 2} = \sqrt{25} \cdot \sqrt{2} = 5 \cdot \sqrt{2} = 5\sqrt{2} \\ \sqrt{72} &= \sqrt{36 \cdot 2} = \sqrt{36} \cdot \sqrt{2} = 6 \cdot \sqrt{2} = 6\sqrt{2} \\ \sqrt{8} &= \sqrt{4 \cdot 2} = \sqrt{4} \cdot \sqrt{2} = 2 \cdot \sqrt{2} = 2\sqrt{2} \end{aligned}$$

$$\begin{aligned} \text{б) } 1\frac{7}{8} \cdot \sqrt{(-0,4)^2} - \left(-\frac{1}{5}\right)^2 \cdot \sqrt{(-25)^2} - 1\frac{1}{2} \cdot \sqrt{7\frac{1}{9}} &= \\ \frac{15}{8} \cdot |-0,4| - \frac{1}{25} \cdot |-25| - \frac{3}{2} \cdot \sqrt{\frac{64}{9}} &= \\ \frac{15}{8} \cdot 0,4 - \frac{1}{25} \cdot 25 - \frac{3}{2} \cdot \frac{8}{3} &= \\ \frac{15}{8} \cdot \frac{2}{5} - \frac{1}{25} \cdot \frac{25}{1} - 4 &= \\ \frac{3}{4} - 1 - 4 &= \\ \frac{3}{4} - \frac{5}{1} &= \\ \frac{3}{4} - \frac{20}{4} &= \\ -\frac{17}{4} \end{aligned}$$

3. (45. збирка задатака)

$$\begin{aligned} \text{a) } x^2 &= 6\frac{1}{4} \\ x^2 &= \frac{25}{4} \\ x_1 &= \sqrt{\frac{25}{4}} = \frac{5}{2} \\ x_2 &= -\sqrt{\frac{25}{4}} = -\frac{5}{2} \end{aligned}$$

(56. збирка задатака)

$$\text{б) } 2\frac{1}{3} - 1\frac{1}{5}x^2 = 1\frac{1}{2}$$

$$1\frac{1}{5}x^2 = 2\frac{1}{3} - 1\frac{1}{2}$$

$$\frac{6}{5}x^2 = \frac{7}{3} - \frac{3}{2}$$

$$\frac{6}{5}x^2 = \frac{14}{6} - \frac{9}{6}$$

$$\frac{6}{5}x^2 = \frac{5}{6}$$

$$x^2 = \frac{5}{6} : \frac{6}{5}$$

$$x^2 = \frac{5}{6} \cdot \frac{5}{6}$$

$$x^2 = \frac{25}{36}$$

$$x_1 = \sqrt{\frac{25}{36}} = \frac{5}{6}$$

$$x_1 = -\sqrt{\frac{25}{36}} = -\frac{5}{6}$$

4. (200. збирка задатака)

а)

x	$\frac{1}{4}$	$\frac{1}{2}$	1	2	4,5	5,6
y	$\frac{1}{2}$	1	2	4	9	11,2

$$y = k \cdot x \quad y = 2 \cdot \frac{1}{4} = \frac{1}{2}$$

$$4 = k \cdot 2 \quad y = 2 \cdot \frac{1}{2} = 1$$

$$k = 2 \quad 2 = 2 \cdot x \text{ следи да је } x = 2 : 2 = 1$$

$$9 = 2 \cdot x \text{ следи да је } x = 9 : 2 = 4,5$$

$$y = 2 \cdot 5,6 = 11,2$$

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