

(A)

$$\begin{aligned} (1) & (\sqrt{225} - 3\sqrt{121}) : (2\sqrt{0.09} + 0.074\sqrt{10000}) = \\ & = (15 - 3 \cdot 11) : (2\sqrt{\frac{9}{100}} + 0.074 \cdot 100) = \\ & = (-18) : (2 \cdot \frac{3}{10} + 7,4) = \\ & = (-18) : (0,6 + 7,4) = \\ & = (-18) : 8 = -\frac{9}{4} \end{aligned}$$

$$(2) |3x+6| = 8$$

$$\begin{aligned} 3x+6 &= 8 & 3x+6 &= -8 \\ x &= \frac{8-6}{3} & x &= \frac{-8-6}{3} \\ x_1 &= \frac{2}{3} & x_2 &= -\frac{14}{3} \end{aligned}$$

$$(3) |3a+9| - (3a+9) = 0$$

$$\Leftrightarrow |3a+9| = 3a+9$$

$$\Leftrightarrow 3a+9 \geq 0$$

$$3a \geq -9$$

$$\underline{a \geq -3}$$

$$(4) 5x + \frac{1}{2} < 2x - 1 < \frac{3}{2}(3x+1)$$

$$(5x + \frac{1}{2} < 2x - 1), (2x - 1 < \frac{9x}{2} + \frac{3}{2})$$

$$3x < -\frac{3}{2} \quad | : 2 \quad 4x - 2 < 9x + 3$$

$$6x < -3 \quad | : 6 \quad -5x < 5 \quad | : (-5)$$

$$\underline{x < -\frac{1}{2}} \quad \underline{x > -1}$$

$$\underline{-1 < x < -\frac{1}{2}}$$

(A)

$$\begin{aligned} (5) & \frac{\sqrt{3}+\sqrt{5}}{\sqrt{3}-\sqrt{5}} - \frac{\sqrt{3}-\sqrt{5}}{\sqrt{3}+\sqrt{5}} + \sqrt{60} = \\ & = \frac{(\sqrt{3}+\sqrt{5})^2 - (\sqrt{3}-\sqrt{5})^2}{(\sqrt{3}-\sqrt{5})(\sqrt{3}+\sqrt{5})} + \sqrt{60} = \\ & = \frac{3+5+2\sqrt{15} - (3+5-2\sqrt{15})}{3-5} + 2\sqrt{15} = \\ & = -2\sqrt{15} + 2\sqrt{15} = \underline{0} \end{aligned}$$

$$(6) (\sqrt{8+4\sqrt{3}} + \sqrt{8-4\sqrt{3}})^2 - \left(\frac{1}{2\sqrt{6}}\right)^2 =$$

$$= 8+4\sqrt{3} + 8-4\sqrt{3} + 2\sqrt{(8+4\sqrt{3})(8-4\sqrt{3})} - (2\sqrt{6})$$

$$= 16 + 2\sqrt{64-48} - 24 =$$

$$= 16 + 2 \cdot 4 - 24 = \underline{0}$$

(7) $x \dots$ stevec $\frac{x}{x+20} ?$
 $x+20 \dots$ imenovalec

$$\frac{x \cdot 1,35}{(x+20)1,4} = \frac{1}{4}$$

$$\begin{aligned} 1,35 \cdot 4x &= 1,4(x+20) \\ 5,4x &= 1,4x + 28 \\ 4x &= 28 \\ x &= 7 \end{aligned}$$

$$\Rightarrow x+20 = 27$$

$$\underline{\underline{ulomez = \frac{7}{27}}}$$

□.