

Operace s racionálními čísly

1. Vypočítejte:

$$\text{a) } \frac{2}{3} - \frac{9}{2} \cdot \frac{2}{5} =$$

$$\text{b) } -2 : \frac{3}{5} + 3 \cdot \frac{1}{2} =$$

$$\text{c) } \left(\frac{1}{3} - \frac{1}{2}\right) \cdot \left(-\frac{4}{7} + \frac{1}{3}\right) =$$

$$\text{d) } \frac{5}{6} : \left(\frac{1}{3} - \frac{3}{4}\right) =$$

$$\text{e) } 0,5 \cdot \frac{1}{3} - 1,4 : \frac{3}{5} =$$

$$\text{f) } \left(\frac{5}{4} - 1,25\right) \cdot 3,24 =$$

$$\text{g) } -10 \cdot \left(-\frac{4}{7} : \frac{2}{21}\right) =$$

$$\text{h) } \left(\frac{1}{2} - \frac{1}{3} + \frac{1}{4}\right) : \left[\frac{1}{2} \cdot \left(-\frac{1}{3}\right) \cdot \frac{1}{4}\right] =$$

2. Vypočítejte:

$$\text{a) } \frac{\frac{1}{3} - \frac{2}{4}}{\frac{2}{3}} =$$

$$\text{c) } \frac{-\frac{1}{3} + \frac{2}{5}}{\frac{7}{15} - \frac{4}{3}} =$$

$$\text{b) } \frac{-1\frac{1}{5}}{\frac{3}{5} - \frac{2}{3}} =$$

$$\text{d) } -\frac{1,5 - 2\frac{1}{4}}{-1\frac{3}{4} + 2,5} =$$

Řešení:

1. Vypočítejte:

$$\text{a) } \frac{2}{3} - \frac{9}{2} \cdot \frac{2}{5} = \frac{2}{3} - \frac{9}{5} = -1\frac{2}{15}$$

$$\text{b) } -2 : \frac{3}{5} + 3 \cdot \frac{1}{2} = -\frac{10}{3} + \frac{3}{2} = -1\frac{5}{6}$$

$$\text{c) } \left(\frac{1}{3} - \frac{1}{2}\right) \cdot \left(-\frac{4}{7} + \frac{1}{3}\right) = \frac{-1}{6} \cdot \frac{-5}{21} = \frac{5}{126}$$

$$\text{d) } \frac{5}{6} : \left(\frac{1}{3} - \frac{3}{4}\right) = \frac{5}{6} \cdot \left(-\frac{12}{5}\right) = -2$$

$$\text{e) } 0,5 \cdot \frac{1}{3} - 1,4 : \frac{3}{5} = \frac{1}{6} - \frac{7}{3} = -2\frac{1}{6}$$

$$\text{f) } \left(\frac{5}{4} - 1,25\right) \cdot 3,24 = 0 \cdot 3,24 = 0$$

$$\text{g) } -10 \cdot \left(-\frac{4}{7} : \frac{2}{21}\right) = -10 \cdot (-6) = 60$$

$$\text{h) } \left(\frac{1}{2} - \frac{1}{3} + \frac{1}{4}\right) : \left[\frac{1}{2} \cdot \left(-\frac{1}{3}\right) \cdot \frac{1}{4}\right] = \frac{5}{12} \cdot \left(-\frac{24}{1}\right) = -10$$

2. Vypočítejte:

$$\text{a) } \frac{\frac{1}{3} - \frac{2}{4}}{\frac{2}{3}} = \frac{-\frac{4}{12} \cdot \frac{3}{2}}{-\frac{1}{2}} = -\frac{1}{2}$$

$$\text{c) } \frac{-\frac{1}{3} + \frac{2}{5}}{\frac{7}{15} - \frac{4}{3}} = \frac{5}{15} \cdot \left(-\frac{15}{13}\right) = -\frac{5}{13}$$

$$\text{b) } \frac{-1\frac{1}{5}}{\frac{3}{5} - \frac{2}{3}} = -\frac{6}{5} \cdot \left(-\frac{15}{1}\right) = 18$$

$$\text{d) } -\frac{1,5 - 2\frac{1}{4}}{-1\frac{3}{4} + 2,5} = -\frac{-0,75}{0,75} = 1$$