

43. Složený zlomek

Složený zlomek je zlomek, který má v čitateli či jmenovateli (nebo v obojím) zase zlomek.

Složený zlomek lze nahradit podílem (dělením) zlomků.

Složený zlomek nahrazuje závorky

$$\left(\frac{2}{3} + \frac{1}{4}\right) : \left(\frac{3}{4} - \frac{1}{2}\right) = \frac{\frac{2}{3} + \frac{1}{4}}{\frac{3}{4} - \frac{1}{2}}$$

Př.

$$\frac{\frac{2}{3}}{\frac{1}{7}} = \frac{2}{3} : \frac{1}{7} = \frac{2}{3} \cdot \frac{7}{1} = \frac{14}{3}$$

$$\frac{\frac{2}{3} + \frac{1}{4}}{\frac{3}{4} - \frac{1}{2}} = \frac{\frac{8+3}{12}}{\frac{3-2}{4}} = \frac{\frac{11}{12}}{\frac{1}{4}} = \frac{11}{12} : \frac{1}{4} = \frac{11}{12} \cdot \frac{4}{1} = \frac{11}{12} \cdot \frac{4}{1} = \frac{11}{3}$$

$$\frac{-1\frac{5}{7} \cdot \left(\frac{1}{6} - \frac{3}{4}\right)}{1 - \frac{1}{7} \cdot 1\frac{3}{4}} = \frac{-\frac{12}{7} \cdot \frac{2-9}{12}}{1 - \frac{1}{7} \cdot \frac{7}{4}} = \frac{-\frac{12}{7} \cdot \left(\frac{-7}{12}\right)}{1 - \frac{1}{4}} = \frac{1}{1} \cdot \frac{4}{3} = \frac{4}{3} = 1\frac{1}{3}$$

1) Vypočítejte:

a) $\frac{\frac{2}{5}}{\frac{3}{7}} =$

e) $\frac{\frac{4}{7}}{\frac{5}{7}} =$

b) $\frac{\frac{1}{3}}{\frac{5}{6}} =$

f) $\frac{\frac{2}{3}}{5} =$

c) $\frac{\frac{12}{25}}{\frac{18}{35}} =$

g) $\frac{\frac{7}{21}}{\frac{2}{2}} =$

d) $\frac{\frac{21}{26}}{\frac{14}{13}} =$

h) $\frac{-\frac{3}{4}}{\frac{9}{8}} =$

2) Vypočítejte:

a) $\frac{\frac{1}{5} + \frac{3}{4}}{\frac{11}{10}} =$

b) $\frac{\frac{2}{7} + \frac{2}{3}}{\frac{3}{5} - \frac{3}{7}} =$

c) $\frac{\frac{2}{5} + \frac{3}{4}}{\frac{3}{10} - 1} =$

d) $\frac{\frac{2}{3} - \frac{3}{5}}{\frac{1}{4} \cdot \frac{3}{5}} =$

e) $\frac{\frac{9}{10} - \frac{11}{15}}{3 \cdot \frac{2}{11}} =$

f) $\frac{\frac{2}{9} + \frac{1}{6}}{\frac{3}{4} - \frac{1}{3}} =$

g) $\frac{\frac{5}{6} - \frac{5}{7}}{-3 - 2} =$

h) $\frac{\frac{2}{15} - \frac{1}{6}}{1 - \frac{3}{5}} =$

3) Vypočítejte:

$$\text{a) } \frac{\frac{1}{3} - 1}{0,25 - \frac{2}{3}} =$$

$$\text{b) } \frac{0,3 + \frac{2}{5}}{2 \cdot \frac{3}{7}} =$$

$$\text{c) } \frac{1 + \frac{3}{5}}{2 - \frac{3}{10}} =$$

$$\text{d) } \frac{0,75 - 1\frac{1}{3}}{\frac{1}{6} + 0,5} =$$

$$\text{e) } \frac{\frac{6}{7} - 1,5}{0,8 - 1\frac{1}{4}} =$$

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

$$\text{g) } \frac{1 - \frac{2}{3} \cdot \frac{4}{5}}{2\frac{4}{5}} =$$

$$\text{h) } \frac{\frac{1}{3} - 1,25}{1\frac{4}{5} + 0,2} =$$

4) Vypočítejte:

$$\text{a) } \frac{1\frac{1}{3} : 0,4}{1,1 - \frac{2}{5}} =$$

$$\text{b) } \frac{1\frac{1}{5} - 0,7 - \frac{1}{3}}{\frac{3}{7} : 2} =$$

$$\text{c) } \frac{0,25 + 2 \cdot \frac{2}{5}}{\frac{1}{2} \cdot \left(1 - \frac{7}{8}\right)} =$$

$$\text{d) } \frac{0,8 - \frac{8}{9}}{\frac{13}{15} + \left(-1\frac{2}{3}\right)} =$$

$$\text{e) } \frac{0,05 - \left(-\frac{1}{8}\right)}{1\frac{2}{5} \cdot \left(-\frac{3}{8}\right)} =$$

$$\text{f) } \frac{-\frac{1}{4} \cdot 0,6}{-\frac{1}{6} + 1\frac{2}{5}} =$$

$$\text{g) } \frac{\frac{1}{4} \cdot 10 - 2\frac{2}{5}}{1,2 - \left(+\frac{3}{4}\right)} =$$

$$\text{h) } \frac{\frac{1}{2} \cdot 0,01}{0,04 \cdot 100} =$$

