

Dělení zlomků

1) Vyděl zlomek přirozeným číslem:

$$a) 1 : \frac{13}{5} = \frac{5}{13}$$

$$b) 2 : \frac{1}{5} = \frac{2}{1} \cdot \frac{5}{1} = 10$$

$$c) \frac{19}{55} : 3 = \frac{19}{55} \cdot \frac{1}{3} = \frac{19}{165}$$

$$d) \frac{5}{12} : 5 = \frac{5}{12} \cdot \frac{1}{5} = \frac{1}{12}$$

$$e) 22 : \frac{11}{7} = \frac{22}{1} \cdot \frac{7}{11} = 14$$

$$f) \frac{21}{16} : 3 = \frac{21}{16} \cdot \frac{1}{3} = \frac{7}{16}$$

$$g) \frac{35}{3} : 7 = \frac{35}{3} \cdot \frac{1}{7} = \frac{5}{3}$$

$$h) \frac{56}{9} : 2 = \frac{56}{9} \cdot \frac{1}{2} = \frac{28}{9}$$

2) Vyděl zlomek zlomkem:

$$a) \frac{2}{7} : \frac{3}{4} = \frac{2}{7} \cdot \frac{4}{3} = \frac{8}{21}$$

$$b) \frac{1}{7} : \frac{2}{11} = \frac{1}{7} \cdot \frac{11}{2} = \frac{11}{14}$$

$$c) \frac{3}{8} : \frac{1}{5} = \frac{3}{8} \cdot \frac{5}{1} = \frac{15}{8}$$

$$d) \frac{2}{9} : \frac{1}{7} = \frac{2}{9} \cdot \frac{7}{1} = \frac{14}{9}$$

$$e) \frac{3}{4} : \frac{1}{17} = \frac{3}{4} \cdot \frac{17}{1} = \frac{51}{4}$$

$$f) \frac{3}{7} : \frac{4}{5} = \frac{3}{7} \cdot \frac{5}{4} = \frac{15}{28}$$

$$g) \frac{7}{9} : \frac{1}{4} = \frac{7}{9} \cdot \frac{4}{1} = \frac{28}{9}$$

$$h) \frac{4}{19} : \frac{3}{2} = \frac{4}{19} \cdot \frac{2}{3} = \frac{8}{57}$$

3) Vyděl zlomek zlomkem, využij výhodného krácení:

$$a) \frac{7}{12} : \frac{8}{2} = \frac{7}{12} \cdot \frac{2}{8} = \frac{7}{48}$$

$$b) \frac{15}{4} : \frac{3}{10} = \frac{15}{4} \cdot \frac{10}{3} = \frac{25}{2}$$

$$c) \frac{5}{6} : \frac{20}{9} = \frac{5}{6} \cdot \frac{9}{20} = \frac{3}{8}$$

$$d) \frac{14}{3} : \frac{28}{21} = \frac{14}{3} \cdot \frac{21}{28} = \frac{7}{2}$$

$$e) \frac{25}{16} : \frac{15}{4} = \frac{25}{16} \cdot \frac{4}{15} = \frac{5}{12}$$

$$f) \frac{16}{9} : \frac{12}{63} = \frac{16}{9} \cdot \frac{63}{12} = \frac{28}{3}$$

$$g) \quad \frac{22}{5} : \frac{77}{30} = \frac{\cancel{22}^2}{5} \cdot \frac{\cancel{30}^6}{\cancel{77}^7} = \frac{12}{7}$$

$$h) \quad \frac{54}{12} : \frac{18}{4} = \frac{\cancel{54}^3}{\cancel{12}^3} \cdot \frac{\cancel{4}^1}{\cancel{18}^9} = \frac{3}{3} = 1$$

4) Vypočítej:

$$a) \quad 5\frac{1}{4} : 2\frac{1}{6} = \frac{21}{4} : \frac{13}{6} = \frac{21}{4} \cdot \frac{6^3}{13} = \frac{63}{26}$$

$$b) \quad 7\frac{1}{3} : 3\frac{1}{6} = \frac{22}{3} : \frac{19}{6} = \frac{22}{3} \cdot \frac{6^2}{19} = \frac{44}{19}$$

$$c) \quad 7\frac{2}{4} : 1\frac{1}{2} = \frac{30}{4} : \frac{3}{2} = \frac{30^{10}}{4} \cdot \frac{2^1}{3} = \frac{10}{2} = 5$$

$$d) \quad 1\frac{2}{5} : 1\frac{3}{10} = \frac{7}{5} : \frac{13}{10} = \frac{7}{5} \cdot \frac{10^2}{13} = \frac{14}{13}$$

$$e) \quad \left(\frac{2}{5} \cdot \frac{7}{4}\right) : 2 = \frac{7}{10} : \frac{2}{1} = \frac{7}{10} \cdot \frac{1}{2} = \frac{7}{20}$$

$$f) \quad \left(\frac{5}{6} + \frac{3}{4}\right) : \frac{2}{3} =$$

$$g) \quad \frac{5}{12} \cdot \left(\frac{12}{5} \cdot \frac{1}{30}\right) = \frac{5}{12} \cdot \left(\frac{12}{5} \cdot \frac{30^6}{1}\right) = \frac{5}{12} \cdot \frac{72^6}{1} = \frac{30}{1}$$

$$h) \quad \frac{1}{8} + \left(\frac{3}{16} : \frac{9}{4}\right) =$$

5) Vypočítej složený zlomek:

$$a) \quad \frac{42}{25} : \frac{28}{20} = \frac{42}{25} : \frac{28}{20} = \frac{42}{25} \cdot \frac{20^4}{28} = \frac{21}{5} \cdot \frac{4^2}{14} = \frac{21^3}{5} \cdot \frac{2}{7} = \frac{6}{5}$$

$$b) \quad \frac{72}{36} : \frac{81}{18} = \frac{72}{36} : \frac{81}{18} = \frac{72^2}{36} \cdot \frac{18^2}{81} = \frac{4}{9}$$