

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ



## DĚLENÍ ZLOMKŮ

(M-07-16)

Dané příklady vypočítejte a výsledek dejte do základního tvaru.

$$1) \frac{8}{9} : 5 = \frac{8}{9} \cdot \frac{1}{5} = \frac{8 \cdot 1}{9 \cdot 5} = \frac{8 \cdot 1}{9 \cdot 5} = \frac{8}{45}$$

$$2) 7 : \frac{2}{3} = \frac{7}{1} \cdot \frac{3}{2} = \frac{21}{2} = \underline{\underline{10\frac{1}{2}}}$$

$$3) \frac{4}{5} : \frac{6}{7} = \frac{4}{5} \cdot \frac{7}{6} = \frac{2 \cdot 7}{5 \cdot 3} = \frac{14}{15}$$

$$4) \frac{1}{4} : \left( \frac{5}{7} + \frac{2}{5} \right) = \frac{1}{4} : \frac{5 \cdot 5 + 2 \cdot 7}{7 \cdot 5} = \frac{1}{4} : \frac{25 + 14}{35} = \frac{1}{4} \cdot \frac{35}{39} = \frac{35}{156}$$

$$5) \left( \frac{3}{5} - \frac{1}{3} \right) : \frac{4}{7} = \frac{3 \cdot 3 - 1 \cdot 5}{5 \cdot 3} : \frac{4}{7} = \frac{4}{15} \cdot \frac{7}{4} = \frac{7}{15}$$

$$6) \frac{3}{7} + \frac{3}{4} : \left( \frac{8}{9} + \frac{1}{2} \right) = \frac{3}{7} + \frac{3}{4} : \frac{8 \cdot 2 + 1 \cdot 9}{9 \cdot 2} = \frac{3}{7} + \frac{3}{4} : \frac{25}{18} = \frac{3}{7} + \frac{3}{4} \cdot \frac{18}{25} = \frac{3}{7} + \frac{3 \cdot 9}{2 \cdot 25} = \frac{3}{7} + \frac{27}{50} =$$

$$\frac{3 \cdot 50 + 27 \cdot 7}{7 \cdot 50} = \frac{150 + 189}{350} = \frac{339}{350}$$

$$7) 24 - \frac{1}{5} : \left( \frac{7}{8} : \frac{14}{24} \right) = \frac{24}{1} - \frac{1}{5} : \left( \frac{7}{8} \cdot \frac{24}{14} \right) = \frac{24}{1} - \frac{1}{5} : \left( \frac{1 \cdot 3}{1 \cdot 2} \right) = \frac{24}{1} - \frac{1}{5} : \frac{3}{2} = \frac{24}{1} - \frac{1}{5} \cdot \frac{2}{3} = \frac{24}{1} - \frac{2}{15} =$$

$$= \frac{24 \cdot 15 - 2}{15} = \frac{360 - 2}{15} = \frac{358}{15} = \underline{\underline{23\frac{13}{15}}}$$

$$8) \left( \frac{5}{6} - \frac{1}{3} \right) : \left( \frac{12}{13} + \frac{5}{26} \right) = \frac{5 \cdot 2 - 1 \cdot 4}{6 \cdot 2} : \frac{2 \cdot 12 + 5}{26} = \frac{9}{18} : \frac{26}{26} = \frac{9}{18} \cdot \frac{26}{29} = \frac{1}{2} \cdot \frac{26}{29} = \frac{26}{58} = \frac{13}{29}$$

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$$9) \left[ 3 : \left( \frac{1}{9} + \frac{2}{3} \cdot \frac{6}{8} \right) \right] + \frac{8}{9} : 3 = \left[ 3 : \left( \frac{1}{9} + \frac{1}{1} \cdot \frac{2}{2} \right) \right] + \frac{8}{9} \cdot \frac{1}{3} = \left[ \frac{3}{1} : \frac{2+2.9}{9.2} \right] + \frac{8}{27} = \frac{3}{1} \cdot \frac{18}{20} + \frac{8}{27} =$$

$$\frac{3}{1} \cdot \frac{9}{10} + \frac{8}{27} = \frac{27}{10} + \frac{8}{27} = \frac{27 \cdot 27 + 8 \cdot 10}{27 \cdot 10} = \frac{729 + 80}{270} = \frac{809}{270} = \underline{\underline{2 \frac{269}{270}}}$$

$$10) \left[ \frac{2}{5} - \frac{1}{8} \left( \frac{16}{15} - \frac{2}{3} \right) \right] : \left( 3 - \frac{3}{5} \right) = \left( \frac{2}{5} - \frac{1}{8} \cdot \frac{16-2.5}{15} \right) : \left( \frac{3}{1} - \frac{3}{5} \right) = \left( \frac{2}{5} - \frac{6}{120} \right) : \left( \frac{5.3-3}{5} \right) =$$

$$\left( \frac{2.24-6}{120} \right) \cdot \frac{5}{12} = \frac{42}{120} \cdot \frac{5}{12} = \frac{21}{60} \cdot \frac{5}{12} = \frac{7}{4} \cdot \frac{1}{12} = \underline{\underline{\frac{7}{48}}}$$