Násobení zlomků – I

A	B	C
$\frac{1}{2} \cdot \frac{1}{3} =$	$\frac{1}{3} \cdot \frac{1}{4} =$	$\frac{1}{5} \cdot \frac{1}{2} =$
$\frac{2}{3} \cdot \frac{4}{5} =$	$\frac{7}{8} \cdot \frac{1}{5} =$	$\frac{4}{5} \cdot \frac{3}{7} =$
$\frac{2}{6} \cdot \frac{5}{7} =$	$\frac{4}{8} \cdot \frac{5}{9} =$	$\frac{5}{10} \cdot \frac{1}{8} =$
$\frac{10}{20} \cdot \frac{5}{25} =$	$\frac{4}{12} \cdot \frac{20}{40} =$	$\frac{20}{30} \cdot \frac{5}{15} =$
$\frac{8}{12} \cdot \frac{7}{14} =$	$\frac{9}{27} \cdot \frac{4}{16} =$	$\frac{6}{18} \cdot \frac{15}{25} =$
$3 \cdot \frac{7}{10} =$	$\frac{9}{10} \cdot 2 =$	$4 \cdot \frac{3}{10} =$
$\frac{5}{6} \cdot 2 =$	$3 \cdot \frac{7}{9} =$	$\frac{7}{8} \cdot 2 =$
$\frac{0}{21} \cdot \frac{45}{60} =$	$\frac{40}{55} \cdot \frac{0}{17} =$	$\frac{0}{19} \cdot \frac{60}{66} =$
$\frac{16}{30} \cdot \frac{25}{24} =$	$\frac{18}{32} \cdot \frac{8}{27} =$	$\frac{12}{33} \cdot \frac{22}{18} =$
$\frac{80}{100} \cdot \frac{60}{120} =$	$\frac{20}{22} \cdot \frac{55}{80} =$	$\frac{72}{80} \cdot \frac{50}{90} =$

Násobení zlomků – II

A

$\frac{10}{16} \cdot \frac{8}{12} =$

$\frac{11}{12} \cdot \frac{18}{22} =$

$\frac{27}{36} \cdot \frac{24}{30} =$

$\frac{24}{30} \cdot \frac{5}{36} =$

$3 \cdot \frac{4}{9} =$

$\frac{9}{10} \cdot 2 =$

$\frac{3}{5} \cdot 1\frac{1}{6} =$

$2\frac{1}{5} \cdot 1\frac{5}{11} =$

$1\frac{3}{5} \cdot 2\frac{1}{8} =$

$3\frac{1}{2} \cdot 1\frac{1}{2} =$

B

$\frac{12}{20} \cdot \frac{16}{24} =$

$\frac{16}{30} \cdot \frac{24}{36} =$

$\frac{15}{20} \cdot \frac{45}{50} =$

$\frac{5}{39} \cdot \frac{26}{30} =$

$\frac{7}{15} \cdot 3 =$

$2 \cdot \frac{11}{12} =$

$\frac{2}{7} \cdot 1\frac{1}{4} =$

$1\frac{3}{4} \cdot 2\frac{2}{7} =$

$2\frac{4}{9} \cdot 1\frac{4}{5} =$

$1\frac{1}{4} \cdot 2\frac{2}{3} =$

Násobení zlomků – III

V tomto cvičení si správně uvědomte, která matematická operace má přednost!

A (celkem 10 bodů)

$\frac{8}{15} \cdot \frac{1}{10} \cdot \frac{20}{24} =$

$\frac{2}{5} \cdot \frac{3}{4} \cdot \frac{20}{30} =$

$\frac{6}{7} \cdot 2 \cdot \frac{3}{4} =$

$\frac{2}{3} \cdot 1\frac{1}{2} \cdot \frac{6}{7} =$

$2\frac{1}{4} \cdot 0 \cdot 3\frac{3}{7} =$

B (celkem 10 bodů)

$\frac{9}{10} \cdot \frac{1}{4} \cdot \frac{20}{36} =$

$\frac{4}{7} \cdot \frac{35}{40} \cdot \frac{3}{5} =$

$\frac{5}{9} \cdot 3 \cdot \frac{9}{10} =$

$\frac{3}{4} \cdot 1\frac{1}{4} \cdot \frac{8}{9} =$

$1\frac{4}{7} \cdot 2\frac{3}{5} \cdot 0 =$

C (celkem 12bodů)

$\frac{24}{8} \cdot \frac{10}{30} + \frac{5}{12} =$

$\frac{2}{6} \cdot \frac{5}{8} + \frac{7}{8} \cdot \frac{10}{14} =$

$\frac{2}{5} \cdot 3 - \frac{10}{15} =$

$3 + \frac{1}{2} \cdot \frac{10}{14} =$

$2\frac{4}{5} - \frac{12}{14} \cdot \frac{7}{24} =$

$\frac{3}{6} \cdot \frac{8}{9} - \frac{5}{10} \cdot \frac{20}{25} =$

D (celkem 12 bodů)

$\frac{3}{10} \cdot \frac{8}{9} + \frac{4}{15} \cdot \frac{5}{12} =$

$\frac{12}{15} \cdot \frac{6}{10} + \frac{4}{8} =$

$\frac{4}{7} \cdot \frac{1}{12} - \frac{2}{3} \cdot \frac{1}{14} =$

$2\frac{1}{10} \cdot \frac{20}{25} - \frac{6}{15} =$

$1\frac{3}{4} + \frac{2}{3} \cdot \frac{1}{4} =$

$3 - \frac{2}{3} \cdot \frac{9}{10} =$

Dělení zlomků – I

Při dělení zlomků nezapomeňte, že musíte nejprve převést správně na násobení!

A

$\frac{1}{2} : \frac{3}{5} =$

$\frac{3}{7} : \frac{4}{5} =$

$\frac{2}{7} : \frac{4}{8} =$

$\frac{15}{16} : \frac{20}{24} =$

$\frac{4}{8} : \frac{9}{18} =$

$\frac{6}{10} : \frac{12}{20} =$

$6 : \frac{1}{2} =$

$\frac{3}{4} : 2 =$

$1 : \frac{1}{3} =$

$\frac{7}{15} : 14 =$

B

$\frac{2}{5} : \frac{1}{3} =$

$\frac{2}{9} : \frac{5}{7} =$

$\frac{6}{7} : \frac{4}{5} =$

$\frac{12}{15} : \frac{20}{25} =$

$\frac{14}{21} : \frac{10}{20} =$

$\frac{30}{40} : \frac{9}{12} =$

$5 : \frac{1}{3} =$

$\frac{2}{3} : 2 =$

$3 : \frac{1}{2} =$

$\frac{9}{16} : 18 =$

Dělení zlomků – II

Při dělení zlomků nezapomeňte, že musíte nejprve převést správně na násobení!

C

$1\frac{1}{2} : \frac{3}{4} =$

$2\frac{3}{5} : \frac{9}{10} =$

$\frac{6}{7} : 1\frac{3}{7} =$

$\frac{2}{3} : 2\frac{5}{6} =$

$6\frac{1}{3} : 2 =$

$4\frac{1}{5} : 3 =$

$0 : 1\frac{1}{13} =$

$2\frac{1}{6} : 1\frac{1}{9} =$

$7 : 1\frac{1}{4} =$

$3\frac{2}{3} : 6\frac{5}{6} =$

D

$1\frac{1}{4} : \frac{5}{8} =$

$3\frac{4}{5} : \frac{7}{10} =$

$\frac{7}{8} : 1\frac{5}{8} =$

$\frac{2}{5} : 2\frac{7}{10} =$

$4\frac{1}{2} : 2 =$

$3\frac{1}{5} : 3 =$

$0 : 1\frac{1}{11} =$

$2\frac{1}{4} : 1\frac{1}{8} =$

$8 : 2\frac{1}{4} =$

$4\frac{3}{4} : 2\frac{7}{8} =$

Dělení zlomků – III

V tomto cvičení si správně uvědomte, která matematická operace má přednost!

A (celkem 10 bodů)

$\frac{3}{10} : (\frac{3}{8} + 1\frac{1}{2}) =$

$(2\frac{1}{2} - 1\frac{1}{4}) : \frac{7}{8} =$

$\frac{4}{9} : \frac{8}{12} - \frac{1}{7} : \frac{1}{4} =$

$(3\frac{1}{2} - \frac{7}{10}) : \frac{3}{4} =$

$1\frac{6}{7} - \frac{1}{14} : \frac{6}{7} =$

B (celkem 10 bodů)

$1\frac{1}{4} - \frac{1}{2} : \frac{9}{10} =$

$\frac{5}{9} : \frac{8}{10} - \frac{3}{4} : \frac{9}{10} =$

$(\frac{8}{9} + \frac{1}{3}) : \frac{5}{6} =$

$1\frac{1}{4} : (\frac{6}{7} - \frac{3}{4}) =$

$(3\frac{1}{2} - 2\frac{1}{4}) : \frac{5}{8} =$

C (celkem 12 bodů)

$3 - \frac{1}{6} : \frac{5}{9} =$

$1\frac{2}{7} : \frac{1}{14} - \frac{3}{4} : \frac{6}{10} =$

$(\frac{2}{3} + \frac{1}{4}) : \frac{11}{12} =$

$1\frac{3}{11} : (\frac{6}{11} - \frac{1}{2}) =$

$(2\frac{1}{3} - \frac{1}{6}) : \frac{7}{9} =$

$2\frac{5}{8} - \frac{1}{2} : \frac{1}{4} =$

D (celkem 12 bodů)

$\frac{1}{2} : (\frac{7}{8} + \frac{3}{4}) =$

$(3\frac{1}{3} - \frac{1}{2}) : \frac{5}{6} =$

$2\frac{1}{3} : \frac{5}{9} - 3\frac{2}{3} : \frac{11}{12} =$

$(\frac{9}{10} - \frac{1}{4}) : \frac{13}{20} =$

$2\frac{3}{5} - \frac{1}{4} : \frac{7}{8} =$

$6\frac{1}{4} : (\frac{9}{10} - \frac{3}{4}) =$

Násobení zlomků – I - řešení

A

$\frac{1}{2} \cdot \frac{1}{3} = \frac{1}{6}$

$\frac{2}{3} \cdot \frac{4}{5} = \frac{8}{15}$

$\frac{2}{6} \cdot \frac{5}{7} = \frac{5}{21}$

$\frac{10}{20} \cdot \frac{5}{25} = \frac{1}{10}$

$\frac{8}{12} \cdot \frac{7}{14} = \frac{1}{3}$

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

$\frac{5}{6} \cdot 2 = \frac{10}{6} = 1\frac{2}{3}$

$\frac{0}{21} \cdot \frac{45}{60} = 0$

$\frac{16}{30} \cdot \frac{25}{24} = \frac{5}{9}$

$\frac{80}{100} \cdot \frac{60}{120} = \frac{2}{5}$

B

$\frac{1}{3} \cdot \frac{1}{4} = \frac{1}{12}$

$\frac{7}{8} \cdot \frac{1}{5} = \frac{7}{40}$

$\frac{4}{8} \cdot \frac{5}{9} = \frac{5}{18}$

$\frac{4}{12} \cdot \frac{20}{40} = \frac{1}{6}$

$\frac{9}{27} \cdot \frac{4}{16} = \frac{1}{12}$

$\frac{9}{10} \cdot 2 = \frac{18}{10} = 1\frac{4}{5}$

$3 \cdot \frac{7}{9} = \frac{21}{9} = 2\frac{1}{3}$

$\frac{40}{55} \cdot \frac{0}{17} = 0$

$\frac{18}{32} \cdot \frac{8}{27} = \frac{1}{6}$

$\frac{20}{22} \cdot \frac{55}{80} = \frac{5}{8}$

C

$\frac{1}{5} \cdot \frac{1}{2} = \frac{1}{10}$

$\frac{4}{5} \cdot \frac{3}{7} = \frac{12}{35}$

$\frac{5}{10} \cdot \frac{1}{8} = \frac{1}{16}$

$\frac{20}{30} \cdot \frac{5}{15} = \frac{2}{9}$

$\frac{6}{18} \cdot \frac{15}{25} = \frac{1}{5}$

$4 \cdot \frac{3}{10} = \frac{12}{10} = 1\frac{1}{5}$

$\frac{7}{8} \cdot 2 = \frac{14}{8} = 1\frac{3}{4}$

$\frac{0}{19} \cdot \frac{60}{66} = 0$

$\frac{12}{33} \cdot \frac{22}{18} = \frac{4}{9}$

$\frac{72}{80} \cdot \frac{50}{90} = \frac{1}{2}$

Násobení zlomků – II - řešení

A

$\frac{10}{16} \cdot \frac{8}{12} = \frac{8}{15}$

$\frac{11}{12} \cdot \frac{18}{22} = \frac{3}{4}$

$\frac{27}{36} \cdot \frac{24}{30} = \frac{1}{5}$

$\frac{24}{30} \cdot \frac{5}{36} = \frac{1}{3}$

$3 \cdot \frac{4}{9} = 1\frac{1}{3}$

$\frac{9}{10} \cdot 2 = 1\frac{4}{5}$

$\frac{3}{5} \cdot 1\frac{1}{6} = \frac{7}{10}$

$2\frac{1}{5} \cdot 1\frac{5}{11} = 3\frac{1}{5}$

$1\frac{3}{5} \cdot 2\frac{1}{8} = 3\frac{2}{5}$

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

B

$\frac{12}{20} \cdot \frac{16}{24} = \frac{2}{5}$

$\frac{16}{30} \cdot \frac{24}{36} = \frac{16}{45}$

$\frac{15}{20} \cdot \frac{45}{50} = \frac{27}{40}$

$\frac{5}{39} \cdot \frac{26}{30} = \frac{1}{9}$

$\frac{7}{15} \cdot 3 = 1\frac{2}{5}$

$2 \cdot \frac{11}{12} = 1\frac{5}{6}$

$\frac{2}{7} \cdot 1\frac{1}{4} = \frac{5}{14}$

$1\frac{3}{4} \cdot 2\frac{2}{7} = 4$

$2\frac{4}{9} \cdot 1\frac{4}{5} = 4\frac{2}{5}$

$1\frac{1}{4} \cdot 2\frac{2}{3} = 3\frac{1}{3}$

Násobení zlomků – III - řešení

A (celkem 10 bodů)

$\frac{8}{15} \cdot \frac{1}{10} \cdot \frac{20}{24} = \frac{2}{45}$

$\frac{2}{5} \cdot \frac{3}{4} \cdot \frac{20}{30} = \frac{1}{5}$

$\frac{6}{7} \cdot 2 \cdot \frac{3}{4} = \frac{9}{14}$

$\frac{2}{3} \cdot 1\frac{1}{2} \cdot \frac{6}{7} = \frac{6}{7}$

$2\frac{1}{4} \cdot 0 \cdot 3\frac{3}{7} = 0$

B (celkem 10 bodů)

$\frac{9}{10} \cdot \frac{1}{4} \cdot \frac{20}{36} = \frac{1}{8}$

$\frac{4}{7} \cdot \frac{35}{40} \cdot \frac{3}{5} = \frac{3}{10}$

$\frac{5}{9} \cdot 3 \cdot \frac{9}{10} = 1\frac{1}{2}$

$\frac{3}{4} \cdot 1\frac{1}{4} \cdot \frac{8}{9} = \frac{5}{6}$

$1\frac{4}{7} \cdot 2\frac{3}{5} \cdot 0 = 0$

C (celkem 12 bodů)

$\frac{24}{8} \cdot \frac{10}{30} + \frac{5}{12} = 1\frac{5}{12}$

$\frac{2}{6} \cdot \frac{5}{8} + \frac{7}{8} \cdot \frac{10}{14} = \frac{5}{6}$

$\frac{2}{5} \cdot 3 - \frac{10}{15} = \frac{8}{15}$

$3 + \frac{1}{2} \cdot \frac{10}{14} = 3\frac{5}{14}$

$2\frac{4}{5} - \frac{12}{14} \cdot \frac{7}{24} = 2\frac{11}{20}$

$\frac{3}{6} \cdot \frac{8}{9} - \frac{5}{10} \cdot \frac{20}{25} = \frac{2}{45}$

D (celkem 12 bodů)

$\frac{3}{10} \cdot \frac{8}{9} + \frac{4}{15} \cdot \frac{5}{12} = \frac{17}{45}$

$\frac{12}{15} \cdot \frac{6}{10} + \frac{4}{8} = \frac{49}{50}$

$\frac{4}{7} \cdot \frac{1}{12} - \frac{2}{3} \cdot \frac{1}{14} = 0$

$2\frac{1}{10} \cdot \frac{20}{25} - \frac{6}{15} = 1\frac{7}{25}$

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

$3 - \frac{2}{3} \cdot \frac{9}{10} = 2\frac{2}{5}$

Dělení zlomků – I - řešení

A

$\frac{1}{2} : \frac{3}{5} = \frac{5}{6}$

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

$\frac{2}{7} : \frac{4}{8} = \frac{4}{7}$

$\frac{15}{16} : \frac{20}{24} = \frac{9}{16}$

$\frac{4}{8} : \frac{9}{18} = 1$

$\frac{6}{10} : \frac{12}{20} = 1$

$6 : \frac{1}{2} = 12$

$\frac{3}{4} : 2 = \frac{3}{8}$

$1 : \frac{1}{3} = 3$

$\frac{7}{15} : 14 = \frac{1}{30}$

B

$\frac{2}{5} : \frac{1}{3} = 1\frac{1}{5}$

$\frac{2}{9} : \frac{5}{7} = \frac{14}{45}$

$\frac{6}{7} : \frac{4}{5} = 1\frac{1}{14}$

$\frac{12}{15} : \frac{20}{25} = 1$

$\frac{14}{21} : \frac{10}{20} = 1\frac{1}{3}$

$\frac{30}{40} : \frac{9}{12} = 1$

$5 : \frac{1}{3} = 15$

$\frac{2}{3} : 2 = \frac{1}{3}$

$3 : \frac{1}{2} = 6$

$\frac{9}{16} : 18 = \frac{1}{32}$

Dělení zlomků – II - řešení

C

$1\frac{1}{2} : \frac{3}{4} = 2$

$2\frac{3}{5} : \frac{9}{10} = 2\frac{8}{9}$

$\frac{6}{7} : 1\frac{3}{7} = \frac{3}{5}$

$\frac{2}{3} : 2\frac{5}{6} = \frac{4}{17}$

$6\frac{1}{3} : 2 = 3\frac{1}{6}$

$4\frac{1}{5} : 3 = 1\frac{2}{5}$

$0 : 1\frac{1}{13} = 0$

$2\frac{1}{6} : 1\frac{1}{9} = 1\frac{19}{20}$

$7 : 1\frac{1}{4} = 5\frac{3}{5}$

$3\frac{2}{3} : 6\frac{5}{6} = \frac{22}{41}$

D

$1\frac{1}{4} : \frac{5}{8} = 2$

$3\frac{4}{5} : \frac{7}{10} = 5\frac{3}{7}$

$\frac{7}{8} : 1\frac{5}{8} = \frac{7}{13}$

$\frac{2}{5} : 2\frac{7}{10} = \frac{4}{27}$

$4\frac{1}{2} : 2 = 2\frac{1}{4}$

$3\frac{1}{5} : 3 = 1\frac{1}{15}$

$0 : 1\frac{1}{11} = 0$

$2\frac{1}{4} : 1\frac{1}{8} = 2$

$8 : 2\frac{1}{4} = 3\frac{5}{9}$

$4\frac{3}{4} : 2\frac{7}{8} = 1\frac{15}{23}$

Dělení zlomků – III - řešení

A (celkem 10 bodů)

$\frac{3}{10} : (\frac{3}{8} + 1\frac{1}{2}) = \frac{4}{25}$

$(2\frac{1}{2} - 1\frac{1}{4}) : \frac{7}{8} = 1\frac{3}{7}$

$\frac{4}{9} : \frac{8}{12} - \frac{1}{7} : \frac{1}{4} = \frac{2}{21}$

$(3\frac{1}{2} - \frac{7}{10}) : \frac{3}{4} = 18\frac{2}{3}$

$1\frac{6}{7} - \frac{1}{14} : \frac{6}{7} = 1\frac{65}{84}$

B (celkem 10 bodů)

$1\frac{1}{4} - \frac{1}{2} : \frac{9}{10} = \frac{25}{36}$

$\frac{5}{9} : \frac{8}{10} - \frac{3}{4} : \frac{9}{10} = 1\frac{17}{18}$

$(\frac{8}{9} + \frac{1}{3}) : \frac{5}{6} = 1\frac{7}{15}$

$1\frac{1}{4} : (\frac{6}{7} - \frac{3}{4}) = 11\frac{2}{3}$

$(3\frac{1}{2} - 2\frac{1}{4}) : \frac{5}{8} = 2$

C (celkem 12 bodů)

$3 - \frac{1}{6} : \frac{5}{9} = 2\frac{7}{10}$

$1\frac{2}{7} : \frac{1}{14} - \frac{3}{4} : \frac{6}{10} = 24\frac{1}{4}$

$(\frac{2}{3} + \frac{1}{4}) : \frac{11}{12} = 1$

$1\frac{3}{11} : (\frac{6}{11} - \frac{1}{2}) = 28$

$(2\frac{1}{3} - \frac{1}{6}) : \frac{7}{9} = 2\frac{11}{14}$

$2\frac{5}{8} - \frac{1}{2} : \frac{1}{4} = \frac{5}{8}$

D (celkem 12 bodů)

$\frac{1}{2} : (\frac{7}{8} + \frac{3}{4}) = \frac{4}{13}$

$(3\frac{1}{3} - \frac{1}{2}) : \frac{5}{6} = 1\frac{2}{5}$

$2\frac{1}{3} : \frac{5}{9} - 3\frac{2}{3} : \frac{11}{12} = \frac{1}{5}$

$(\frac{9}{10} - \frac{1}{4}) : \frac{13}{20} = 1$

$2\frac{3}{5} - \frac{1}{4} : \frac{7}{8} = 2\frac{11}{35}$

$6\frac{1}{4} : (\frac{9}{10} - \frac{3}{4}) = 41\frac{2}{3}$