

Bruchrechnen: Gemischte Aufgaben

Bearbeite gemischte Bruchaufgaben mit mehreren Rechenarten, Klammern, Potenzen und Beträgen. Entscheide selbst die passende Reihenfolge und vereinfache jedes Resultat vollständig.

Für Feedback und Anregungen bitte E-Mail an uebungsblaetter.ch@gmail.com.

Gemischte Aufgaben

1) $\frac{4}{9} : \frac{2}{3} + \frac{5}{6}$

2) $\frac{7}{8} - \frac{3}{4} \cdot \frac{2}{9}$

3) $\left| \frac{1}{2} - \frac{5}{4} \right| : \frac{3}{8}$

4) $\left[\left(\frac{2}{3} \right)^2 + \frac{5}{9} \right] : \frac{4}{5}$

5) $\left(\frac{3}{4} - \frac{5}{6} \right) \cdot \left(\frac{2}{5} + \frac{7}{10} \right)$

6) $\frac{1}{2} - \left[\frac{3}{4} - \frac{2}{3} \cdot \left(\frac{5}{8} - \frac{1}{4} \right) \right]$

7) $\left(\frac{3}{4} + \frac{5}{6} \right) \cdot \left(\frac{7}{5} - \frac{2}{3} \right) : \frac{19}{18}$

8) $\left| \frac{2}{3} - \frac{7}{4} \right| + \left(\frac{5}{6} \right)^2 : \frac{25}{18}$

9) $\left[\frac{1}{2} - \left(\frac{3}{5} - \frac{7}{10} \right) \right]^2 + \frac{11}{20}$

10) $\left(\frac{5}{8} : \frac{15}{16} - \frac{2}{9} \right) \cdot \left(\frac{3}{4} + \frac{1}{6} \right)$

11) $\left| \left(\frac{7}{9} - \frac{5}{6} \right) : \left(\frac{1}{3} - \frac{3}{4} \right) \right|$

12) $2 - \left[\left(\frac{3}{4} \right)^2 + \frac{5}{8} \cdot \left(\frac{4}{5} - \frac{2}{3} \right) \right] : \frac{7}{6}$

$$13) \left(\frac{1}{2} + \frac{3}{5}\right) : \left(\frac{7}{4} - \frac{2}{3}\right) + \left(\frac{2}{5}\right)^2$$

$$14) \left[\left|-\frac{5}{6} + \frac{1}{4}\right| + \frac{1}{3}\right] \cdot \left(\frac{9}{10} : \frac{3}{5}\right)$$

$$15) \left(\frac{4}{7} - \frac{3}{14}\right)^3 : \left(\frac{5}{6} - \frac{1}{3}\right)^2$$

$$16) \left\{1 - \left[\frac{2}{3} - \left(\frac{3}{4} - \frac{5}{8}\right)\right]\right\} \cdot \frac{12}{11}$$

Lösungen

Gemischte Aufgaben

$$17) \frac{4}{9} : \frac{2}{3} + \frac{5}{6} = \frac{2}{3} + \frac{5}{6} = \boxed{\frac{3}{2}}$$

$$18) \frac{7}{8} - \frac{3}{4} \cdot \frac{2}{9} = \frac{7}{8} - \frac{1}{6} = \boxed{\frac{17}{24}}$$

$$19) \left| \frac{1}{2} - \frac{5}{4} \right| : \frac{3}{8} = \frac{3}{4} \cdot \frac{8}{3} = \boxed{2}$$

$$20) \left[\left(\frac{2}{3} \right)^2 + \frac{5}{9} \right] : \frac{4}{5} = \left(\frac{4}{9} + \frac{5}{9} \right) \cdot \frac{5}{4} = \boxed{\frac{5}{4}}$$

$$21) \left(\frac{3}{4} - \frac{5}{6} \right) \cdot \left(\frac{2}{5} + \frac{7}{10} \right) = -\frac{1}{12} \cdot \frac{11}{10} = \boxed{-\frac{11}{120}}$$

$$22) \frac{1}{2} - \left[\frac{3}{4} - \frac{2}{3} \cdot \left(\frac{5}{8} - \frac{1}{4} \right) \right] = \frac{1}{2} - \left(\frac{3}{4} - \frac{1}{4} \right) = \boxed{0}$$

$$23) \left(\frac{3}{4} + \frac{5}{6} \right) \cdot \left(\frac{7}{5} - \frac{2}{3} \right) : \frac{19}{18} = \frac{19}{12} \cdot \frac{11}{15} \cdot \frac{18}{19} = \boxed{\frac{11}{10}}$$

$$24) \left| \frac{2}{3} - \frac{7}{4} \right| + \left(\frac{5}{6} \right)^2 : \frac{25}{18} = \frac{13}{12} + \frac{1}{2} = \boxed{\frac{19}{12}}$$

$$25) \left[\frac{1}{2} - \left(\frac{3}{5} - \frac{7}{10} \right) \right]^2 + \frac{11}{20} = \left(\frac{3}{5} \right)^2 + \frac{11}{20} = \boxed{\frac{91}{100}}$$

$$26) \left(\frac{5}{8} : \frac{15}{16} - \frac{2}{9} \right) \cdot \left(\frac{3}{4} + \frac{1}{6} \right) = \left(\frac{2}{3} - \frac{2}{9} \right) \cdot \frac{11}{12} = \boxed{\frac{11}{27}}$$

$$27) \left| \left(\frac{7}{9} - \frac{5}{6} \right) : \left(\frac{1}{3} - \frac{3}{4} \right) \right| = \left| -\frac{1}{18} : \left(-\frac{5}{12} \right) \right| = \boxed{\frac{2}{15}}$$

$$28) 2 - \left[\left(\frac{3}{4} \right)^2 + \frac{5}{8} \cdot \left(\frac{4}{5} - \frac{2}{3} \right) \right] : \frac{7}{6} = 2 - \frac{31}{48} \cdot \frac{6}{7} = \boxed{\frac{81}{56}}$$

$$29) \left(\frac{1}{2} + \frac{3}{5} \right) : \left(\frac{7}{4} - \frac{2}{3} \right) + \left(\frac{2}{5} \right)^2 = \frac{11}{10} \cdot \frac{12}{13} + \frac{4}{25} = \boxed{\frac{382}{325}}$$

$$30) \left[\left| -\frac{5}{6} + \frac{1}{4} \right| + \frac{1}{3} \right] \cdot \left(\frac{9}{10} : \frac{3}{5} \right) = \left(\frac{7}{12} + \frac{1}{3} \right) \cdot \frac{3}{2} = \boxed{\frac{11}{8}}$$

$$31) \left(\frac{4}{7} - \frac{3}{14} \right)^3 : \left(\frac{5}{6} - \frac{1}{3} \right)^2 = \left(\frac{5}{14} \right)^3 : \frac{1}{4} = \boxed{\frac{125}{686}}$$

$$32) \left\{ 1 - \left[\frac{2}{3} - \left(\frac{3}{4} - \frac{5}{8} \right) \right] \right\} \cdot \frac{12}{11} = \frac{11}{24} \cdot \frac{12}{11} = \boxed{\frac{1}{2}}$$