

Rechnen in \mathbb{Q} (Bruchrechnen)**1. Addieren und Subtrahieren in \mathbb{Q} , Brüche gleichnamig**

a) $\frac{2}{7} + \frac{4}{7} =$

b) $\frac{4}{5} - \frac{1}{5} =$

c) $\frac{7}{15} + \frac{2}{15} =$

d) $\frac{13}{16} - \frac{5}{16} =$

2. Addieren und Subtrahieren in \mathbb{Q} , Brüche nicht gleichnamig

a) $\frac{1}{3} + \frac{2}{5} =$

b) $\frac{3}{4} - \frac{3}{7} =$

c) $\frac{7}{12} + \frac{3}{8} =$

d) $\frac{11}{12} - \frac{7}{18} =$

3. Addieren und Subtrahieren in \mathbb{Q} , Klammern

a) $\frac{5}{6} + \left(\frac{3}{4} - \frac{1}{3}\right) =$

b) $\frac{5}{12} - \left(\frac{2}{3} - \frac{1}{6}\right) =$

c) $\frac{5}{14} + \left(\frac{1}{7} + \frac{2}{21}\right) =$

d) $\frac{9}{10} - \left(\frac{2}{5} + \frac{4}{15}\right) =$

4. Multiplizieren in \mathbb{Q}

a) $\frac{2}{3} \cdot \frac{5}{8} =$

b) $\frac{7}{9} \cdot \frac{3}{5} =$

c) $\frac{4}{15} \cdot \frac{5}{6} =$

d) $\frac{10}{12} \cdot \frac{6}{15} =$

5. **Punkt von Strich in \mathbb{Q}**

a) $\frac{5}{6} - \frac{5}{4} \cdot \frac{8}{3} =$

b) $\frac{7}{15} + \frac{3}{5} \cdot \frac{2}{9} =$

c) $\frac{38}{40} - \frac{3}{4} \cdot \frac{3}{5} =$

d) $\frac{2}{14} + \frac{1}{2} \cdot \frac{4}{7} =$

6. **Klammern**

a) $\frac{3}{4} \cdot \left(\frac{2}{3} - \frac{5}{12} \right) =$

b) $\frac{4}{11} \cdot \left(\frac{3}{5} + \frac{1}{2} \right) =$

c) $\frac{11}{15} \cdot \left(\frac{3}{22} - \frac{2}{33} \right) =$

d) $\frac{15}{16} \cdot \left(\frac{2}{3} + \frac{2}{5} \right) =$

7. **Mehrere Klammern**

a) $\left(\frac{2}{3} - \frac{5}{12} \right) \cdot \left(\frac{1}{3} - \frac{1}{12} \right) =$

b) $\left(\frac{1}{4} + \frac{2}{5} \right) \cdot \left(\frac{10}{13} - \frac{1}{2} \right) =$

c) $\left(\frac{4}{7} + \frac{1}{14} \right) \cdot \left(\frac{1}{2} + \frac{2}{3} \right) =$

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

8. **Potenzieren**

a) $\left(\frac{2}{3} \right)^4 =$

b) $\left(\frac{4}{5} \right)^3 =$

c) $\left(\frac{18}{22} \right)^2 =$

d) $\left(\frac{3}{2} \right)^3 =$

9. Potenzen vor Punkt vor Strich

a) $\frac{5}{6} + \frac{3}{5} \cdot \left(\frac{2}{3}\right)^2 =$

b) $\left(\frac{3}{4}\right)^2 - \frac{5}{6} \cdot \frac{3}{5} =$

c) $\frac{5}{6} - \frac{4}{5} \cdot \left(\frac{1}{2}\right)^2 =$

d) $\frac{5}{8} \cdot \left(\frac{2}{5}\right)^2 - \frac{9}{10} =$

10. Klammern dazu

a) $\left(\frac{1}{2}\right)^3 + \frac{3}{4} \cdot \left(\left(\frac{2}{3}\right)^2 + \frac{2}{9}\right) =$

b) $\frac{7}{16} + \left(\frac{3}{4}\right)^2 \cdot \left(\frac{4}{25} - \left(\frac{2}{5}\right)^2\right) =$

c) $\left(\frac{1}{3}\right)^2 - \frac{9}{16} \cdot \left(\frac{2}{3} + \frac{2}{9}\right)^2 =$

d) $\left(\frac{1}{2} + \frac{3}{4}\right) \cdot \left(\frac{8}{25} + \left(\frac{4}{5}\right)^2\right) =$

11. Dividieren

a) $\frac{3}{4} : \frac{5}{8} =$

b) $-\frac{6}{7} : \frac{9}{10} =$

c) $\frac{5}{12} : \left(-\frac{5}{18}\right) =$

d) $-\frac{12}{35} : \left(-\frac{15}{14}\right) =$

12. Klammern dazu

a) $\left(\frac{2}{5} - \left(-\frac{1}{2}\right)\right) : \left(-\frac{7}{10}\right) =$

b) $\frac{7}{10} : \left(\frac{5}{6} + \left(-\frac{1}{4}\right)\right) =$

c) $-\frac{7}{10} : \left(\frac{2}{5} - \frac{1}{2} : \frac{3}{4}\right) =$

d) $\frac{2}{5} : \left(\frac{1}{2} : \left(\frac{7}{10} + \frac{2}{5}\right)\right) =$

Lösungen zu Rechnen in \mathbb{Q} (Bruchrechnen)**1. Addieren und Subtrahieren in \mathbb{Q} , Brüche gleichnamig**

a) $\frac{6}{7}$

b) $\frac{3}{5}$

c) $\frac{3}{5}$

d) $\frac{1}{2}$

2. Addieren und Subtrahieren in \mathbb{Q} , Brüche nicht gleichnamig

a) $\frac{11}{15} =$

b) $\frac{9}{28} =$

c) $\frac{23}{24} =$

d) $\frac{19}{36}$

3. Addieren und Subtrahieren in \mathbb{Q} , Klammern

a) $\frac{5}{4}$

b) $-\frac{1}{12}$

c) $\frac{25}{42}$

d) $\frac{7}{30}$

4. Multiplizieren in \mathbb{Q}

a) $\frac{5}{12}$

b) $\frac{7}{15}$

c) $\frac{2}{9}$

d) $\frac{1}{3}$

5. **Punkt von Strich in \mathbb{Q}**

a) $-\frac{5}{2}$

b) $\frac{3}{5}$

c) $\frac{1}{2}$

d) $\frac{3}{7}$

6. **Klammern**

a) $\frac{3}{16}$

b) $\frac{2}{5}$

c) $\frac{1}{18}$

d) 1

7. **Mehrere Klammern**

a) $\frac{1}{16}$

b) $\frac{7}{40}$

c) $\frac{3}{4}$

d) $\frac{49}{150}$

8. **Potenzieren**

a) $\frac{16}{81}$

b) $\frac{64}{125}$

c) $\frac{81}{121}$

d) $\frac{27}{8}$

9. **Potenzen vor Punkt vor Strich**

a) $\frac{11}{10}$

b) $\frac{1}{16}$

c) $\frac{19}{30}$

d) $-\frac{4}{5}$

10. Klammern dazu

- a) $\frac{5}{8}$
- b) $\frac{7}{16}$
- c) $-\frac{1}{3}$
- d) $\frac{6}{5}$

11. Dividieren

- a) $\frac{6}{5}$
- b) $-\frac{10}{21}$
- c) $-\frac{3}{2}$
- d) $\frac{8}{25}$

12. Klammern dazu

- a) $-\frac{9}{7}$
- b) $\frac{6}{5}$
- c) $\frac{21}{8}$
- d) $\frac{22}{25}$