

Addition und Subtraktion in \mathbb{Q} (Lösungen)

1. (a) $5\frac{7}{8}$ (b) $-5\frac{7}{8}$ (c) $7\frac{41}{42}$ (d) $-6\frac{1}{3}$
2. (a) $10\frac{17}{21}$ (b) $-27\frac{11}{12}$ (c) $-\frac{7}{12}$ (d) $5\frac{1}{2}$ (e) $-2\frac{1}{11}$ (f) $1\frac{1}{3}$
3. (a) $6\frac{5}{8}$ (b) $-1\frac{5}{8}$ (c) $7\frac{41}{42}$ (d) 21
4. (a) 2 Lösungen: $\left(+2\frac{1}{2}\right) + \left(+1\frac{1}{2}\right) = +4$, $\left(+2\frac{1}{2}\right) - \left(-1\frac{1}{2}\right) = +4$
(b) 1 Lösung: $(+1) + \left(-2\frac{1}{2}\right) = -1\frac{1}{2}$
(c) 2 Lösungen: $\left(+\frac{1}{3}\right) - \left(+6\frac{2}{3}\right) = -6\frac{1}{3}$, $\left(+\frac{1}{3}\right) + \left(-6\frac{2}{3}\right) = -6\frac{1}{3}$
(d) keine richtige Lösung möglich!
(e) 2 Lösungen: $\left(-\frac{1}{2}\right) - \left(+3\frac{2}{3}\right) = -4\frac{1}{6}$, $\left(-\frac{1}{2}\right) + \left(-3\frac{2}{3}\right) = -4\frac{1}{6}$
(f) keine richtige Lösung möglich!
(g) 2 Lösungen: $\left(-2\frac{1}{4}\right) + \left(+3\frac{1}{2}\right) = +1\frac{1}{4}$, $\left(-2\frac{1}{4}\right) - \left(-3\frac{1}{2}\right) = +1\frac{1}{4}$
(h) 1 Lösung: $\left(-3\frac{3}{4}\right) - (+5) = -8\frac{3}{4}$
5. (a) $12,54 + 46,46 - 352,57 = 59 - 352,57 = -293,57$
(b) $325,543 - 34,543 + 6,005 - 53,505 = 291 - 47,5 = 243,5$
(c) $32,543 + 32,457 - 2,146 - 100,354 = 65 - 102,5 = -37,5$
6. (a) $-462,811$
(b) $-16,418$
(c) $-9,475$
7. $\frac{3}{7} - \frac{4}{8} = -\frac{1}{14}$
8. $\frac{5}{18} + \frac{5}{24} = \frac{35}{72} = 0,48\bar{6}$
9. (a) $-\frac{1}{16} = -0,0625$

$$(b) \frac{1}{99} - \frac{1}{90} = \frac{10 - 11}{990} = -\frac{1}{990} = -0,00\overline{1}$$

$$10. (a) \frac{14 \cdot 2 - 11 \cdot 3}{90} = -\frac{5}{90} = -\frac{1}{18}$$

$$(b) 2\frac{3}{7} - 6\frac{3}{10} = -\left(6\frac{21}{70} - 2\frac{30}{70}\right) = -\left(5\frac{91}{70} - 2\frac{30}{70}\right) = -3\frac{61}{70}$$