

Lösung Beispiel 322.)

d)

$$-12x^2 + 17x + 5 = 0 \quad a = -12 \quad b = 17 \quad c = 5$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\begin{aligned} x_{1,2} &= \frac{-17 \pm \sqrt{17^2 - 4 \cdot (-12) \cdot 5}}{2 \cdot (-12)} \\ &= \frac{-17 \pm \sqrt{289 + 240}}{-24} \\ &= \frac{-17 \pm \sqrt{529}}{-24} \\ &= \frac{-17 \pm 23}{-24} \end{aligned}$$

$$x_1 = \frac{6}{-24} = -\frac{1}{4} \quad x_2 = \frac{-40}{-24} = \frac{5}{3} = 1\frac{2}{3}$$

Lösung: (1) {}, (2) {}, (3) $\{-\frac{1}{4}; \frac{5}{3}\}$

f)

$$1,5x^2 - 19,5x + 60 = 0 \quad a = 1,5 \quad b = -19,5 \quad c = 60$$

$$x_{1,2} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\begin{aligned} x_{1,2} &= \frac{-19,5 \pm \sqrt{19,5^2 - 4 \cdot 60 \cdot 1,5}}{2 \cdot 1,5} \\ &= \frac{-19,5 \pm \sqrt{380,25 - 360}}{3} \\ &= \frac{-19,5 \pm \sqrt{20,25}}{3} \\ &= \frac{-19,5 \pm 4,5}{3} \end{aligned}$$

$$x_1 = 8 \quad x_2 = 5$$

Lösung: (1) {5; 8}, (2) {5; 8}, (3) {5; 8}

