Lösung Beispiel 446d)

$(2x - 3) \cdot (x + 1) = (3x - 4)^2 - x^2 + 18x - 23$ | ausmultiplizieren

$2x^2 + 2x - 3x - 3 = 9x^2 - 24x + 16 - x^2 + 18x - 23$ | zusammenfassen

$2x^2 - x - 3 = 8x^2 - 6x - 7$ I – $2x^2$

$- x - 3 = 6x^2 - 6x - 7$ I + x

$- 3 = 6x^2 - 5x - 7$ I + 3

$0 = 6x^2 - 5x - 4$ I : 6

$0 = x^2 - \frac{5}{6}x - \frac{4}{6}$

$x_{1,2} = -\frac{p}{2} \pm \sqrt{\left(\frac{p}{2}\right)^2 - q}$ p = $-\frac{5}{6}$ q = $-\frac{4}{6}$

$x_{1,2} = \frac{5}{12} \pm \sqrt{\left(\frac{\frac{5}{6}}{2}\right)^2 + \frac{4}{6}}$

$x_{1,2} = \frac{5}{12} \pm \sqrt{\frac{25}{144} + \frac{4}{6}}$

$x_{1,2} = \frac{5}{12} \pm \sqrt{\frac{121}{144}}$

$x_{1,2} = \frac{5}{12} \pm \frac{11}{12}$

$x_1 = \frac{16}{12} = \frac{4}{3}$ $x_2 = -\frac{6}{12} = -\frac{1}{2}$

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