

Klammern - 22 (Lösung)

Berechne:

$$\begin{aligned} \text{a) } & (6r - 8s + 10t)(4t + 2s - r) = \\ & 24rt + 12st - 6r^2 - 32st - 16s^2 + 8rs + \\ & \quad 40t^2 + 20sr - 10rt = \\ & \underline{14rt - 6r^2 - 16s^2 + 8rs + 40t^2} \end{aligned}$$

$$\begin{aligned} \text{b) } & (x^2 + 2x + 2)(x^2 - x - 1) = \\ & x^4 - x^3 - x^2 + 2x^3 - 2x^2 - 2x + 2x^2 - 2x - 2 = \\ & \underline{x^4 - x^3 - x^2 - 4x - 2} \end{aligned}$$

$$\begin{aligned} \text{c) } & (x + 2)(x + 3)(x + 4) = \\ & [x^2 + 3x + 2x + 6](x + 4) = \\ & x^3 + 4x^2 + 3x^2 + 12x + 2x^2 + 8x + 6x + 24 = \\ & \underline{x^3 + 9x^2 + 26x + 24} \end{aligned}$$

$$\begin{aligned} \text{d) } & (a - 1)(2 + a)(a - 2) = \\ & [2a + a^2 - 2 - a](a - 2) = \\ & 2a^2 - 4a + a^3 - 2a^2 - 2a + 4 - a^2 + 2a = \\ & \underline{a^3 - a^2 - 4a + 4} \end{aligned}$$

$$\begin{aligned} \text{e) } & 10a - (4a + b)(6b - a) = \\ & 10 - [24ab - 4a^2 + 6b^2 - ab] = \\ & 10a - 24ab + 4a^2 - 6b^2 + ab = \\ & 10a - 23ab + 4a^2 - 6b^2 \end{aligned}$$

$$\begin{aligned} \text{f) } & 8x - (6y + 2)(4x - 5) = \\ & 8x - [24xy - 30y + 8x - 10] = \\ & 8x - 24xy + 30y - 8x + 10 = \\ & 30y - 24xy + 10 \end{aligned}$$