

$$h) x \cdot (2x^2 - 14x + 20) = 0 \quad | x \text{ ausklammern}$$

$$\downarrow$$

$$\underline{\underline{x_1 = 0}}$$

$$\swarrow :2$$

$$x^2 - 7x + 10 = 0$$

$$\underline{\underline{x_2 = 2}}$$

$$\underline{\underline{x_3 = 5}}$$

$$i) L = \{2; -3; 1\}$$

$$j) \text{ Nullstelle raten: } x_1 = -2$$

$$(x^3 + 4x^2 + x - 6) : (x + 2) = x^2 + 2x - 3$$

$$\begin{array}{r} - (x^3 + 2x^2) \\ \hline 2x^2 + x \end{array}$$

$$\begin{array}{r} \vdots \\ \hline 0 \end{array}$$

$$\searrow$$

$$\underline{\underline{x_2 = 1}}$$

$$\underline{\underline{x_3 = -3}}$$

$$k) x^4 - 5x^2 + 4 = 0$$

Biquadratische
Gleichung

$$\text{Subst.: } z = x^2$$

$$z^2 - 5z + 4 = 0$$

$$z_1 = 4 = x^2 \rightarrow \underline{\underline{x_{1,2} = \pm 2}}$$

$$z_2 = 1 = x^2 \rightarrow \underline{\underline{x_{3,4} = \pm 1}}$$

$$l) x^7 - 9x^4 + 8x = 0$$

$$x \cdot (x^6 - 9x^3 + 8) = 0$$

$$\downarrow$$

$$\underline{\underline{x_1 = 0}}$$

$$\rightarrow \text{Subst.: } z = x^3 : z^2 - 9z + 8 = 0$$

$$z_1 = 8 \rightarrow \underline{\underline{x_2 = 2}}$$

$$z_2 = 1 \rightarrow \underline{\underline{x_3 = 1}}$$