

## Löse die folgenden biquadratischen Gleichungen $ax^4 + bx^2 + c = 0$

$$\begin{aligned} -7x^4 + 98x^2 - 315 &= 0 \\ x_1 &= 2.24 \quad x_2 = -2.24 \\ x_3 &= 3 \quad x_4 = -3 \end{aligned}$$

$$\begin{aligned} -9.5x^4 &= 0 \\ x_1 &= 0 \quad x_2 = 0 \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} -8x^4 - 48x^2 - 64 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 8x^4 - 104x^2 + 336 &= 0 \\ x_1 &= 2.45 \quad x_2 = -2.45 \\ x_3 &= 2.65 \quad x_4 = -2.65 \end{aligned}$$

$$\begin{aligned} -9.5x^4 + 19x^2 &= 0 \\ x_1 &= 0 \quad x_2 = 0 \\ x_3 &= 1.41 \quad x_4 = -1.41 \end{aligned}$$

$$\begin{aligned} -8.5x^4 + 85x^2 &= 0 \\ x_1 &= 3.16 \quad x_2 = -3.16 \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} 4.5x^4 - 31.5x^2 &= 0 \\ x_1 &= 2.65 \quad x_2 = -2.65 \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} 3.5x^4 + 31.5x^2 + 70 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 5.5x^4 + 27.5x^2 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} 5.5x^4 + 11x^2 + 5.5 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 3x^4 - 21x^2 + 30 &= 0 \\ x_1 &= 2.24 \quad x_2 = -2.24 \\ x_3 &= 1.41 \quad x_4 = -1.41 \end{aligned}$$

$$\begin{aligned} -4.5x^4 - 36x^2 + 40.5 &= 0 \\ x_1 &= 1 \quad x_2 = -1 \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} -2.5x^4 + 20x^2 - 40 &= 0 \\ x_1 &= 2 \quad x_2 = -2 \\ x_3 &= 2 \quad x_4 = -2 \end{aligned}$$

$$\begin{aligned} -0.5x^4 - 5x^2 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} -6x^4 - 24x^2 - 24 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 2x^4 + 38x^2 + 180 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 6x^4 + 60x^2 + 144 &= 0 \\ x_1 &= \diamond \quad x_2 = \diamond \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} 1.5x^4 + 3x^2 - 22.5 &= 0 \\ x_1 &= 1.73 \quad x_2 = -1.73 \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$

$$\begin{aligned} -5x^4 &= 0 \\ x_1 &= 0 \quad x_2 = 0 \\ x_3 &= 0 \quad x_4 = 0 \end{aligned}$$

$$\begin{aligned} 0.5x^4 - x^2 - 4 &= 0 \\ x_1 &= 2 \quad x_2 = -2 \\ x_3 &= \diamond \quad x_4 = \diamond \end{aligned}$$