

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

$$8.5x^4 + 85x^2 + 178.5 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-8x^4 - 8x^2 + 720 = 0$$
$$x_1 = 3 \quad x_2 = -3$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-1.5x^4 - 16.5x^2 - 27 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-4.5x^4 + 13.5x^2 + 180 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 2.83 \quad x_4 = -2.83$$

$$-2.5x^4 - 22.5x^2 - 20 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$5x^4 - 50x^2 + 105 = 0$$
$$x_1 = 1.73 \quad x_2 = -1.73$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$-7x^4 - 42x^2 - 63 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-2x^4 + 12x^2 + 54 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 3 \quad x_4 = -3$$

$$-5x^4 - 5x^2 + 60 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 1.73 \quad x_4 = -1.73$$

$$3.5x^4 - 45.5x^2 + 147 = 0$$
$$x_1 = 2.45 \quad x_2 = -2.45$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$-2x^4 - 6x^2 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$2.5x^4 - 5x^2 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = 1.41 \quad x_4 = -1.41$$

$$-8x^4 - 40x^2 + 112 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 1.41 \quad x_4 = -1.41$$

$$6x^4 - 54x^2 = 0$$
$$x_1 = 3 \quad x_2 = -3$$
$$x_3 = 0 \quad x_4 = 0$$

$$-9x^4 - 54x^2 - 45 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-8x^4 - 88x^2 - 80 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$4.5x^4 - 90x^2 + 450 = 0$$
$$x_1 = 3.16 \quad x_2 = -3.16$$
$$x_3 = 3.16 \quad x_4 = -3.16$$

$$-5x^4 - 25x^2 - 20 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$0.5x^4 - 5.5x^2 + 5 = 0$$
$$x_1 = 1 \quad x_2 = -1$$
$$x_3 = 3.16 \quad x_4 = -3.16$$

$$-x^4 + 12x^2 - 20 = 0$$
$$x_1 = 1.41 \quad x_2 = -1.41$$
$$x_3 = 3.16 \quad x_4 = -3.16$$