

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

$$8.5x^4 + 136x^2 + 510 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-8.5x^4 - 8.5x^2 + 170 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 2 \quad x_4 = -2$$

$$6.5x^4 - 78x^2 + 227.5 = 0$$
$$x_1 = 2.24 \quad x_2 = -2.24$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$9.5x^4 - 123.5x^2 + 342 = 0$$
$$x_1 = 2 \quad x_2 = -2$$
$$x_3 = 3 \quad x_4 = -3$$

$$6.5x^4 + 26x^2 - 292.5 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 2.24 \quad x_4 = -2.24$$

$$8.5x^4 + 68x^2 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-3.5x^4 + 42x^2 - 122.5 = 0$$
$$x_1 = 2.24 \quad x_2 = -2.24$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$-7.5x^4 + 22.5x^2 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = 1.73 \quad x_4 = -1.73$$

$$-7.5x^4 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = 0 \quad x_4 = 0$$

$$-4.5x^4 - 76.5x^2 - 324 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$4.5x^4 + 63x^2 + 216 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-3x^4 + 18x^2 = 0$$
$$x_1 = 0 \quad x_2 = 0$$
$$x_3 = 2.45 \quad x_4 = -2.45$$

$$4.5x^4 - 54x^2 + 157.5 = 0$$
$$x_1 = 2.24 \quad x_2 = -2.24$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$-10x^4 - 80x^2 + 90 = 0$$
$$x_1 = 1 \quad x_2 = -1$$
$$x_3 = \diamond \quad x_4 = \diamond$$

$$-3x^4 - 30x^2 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 0 \quad x_4 = 0$$

$$8.5x^4 - 144.5x^2 + 595 = 0$$
$$x_1 = 2.65 \quad x_2 = -2.65$$
$$x_3 = 3.16 \quad x_4 = -3.16$$

$$-10x^4 + 110x^2 - 280 = 0$$
$$x_1 = 2 \quad x_2 = -2$$
$$x_3 = 2.65 \quad x_4 = -2.65$$

$$-6.5x^4 + 6.5 = 0$$
$$x_1 = 1 \quad x_2 = -1$$
$$x_3 = \diamond \quad x_4 = \diamond$$

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

$$7x^4 - 28x^2 - 84 = 0$$
$$x_1 = \diamond \quad x_2 = \diamond$$
$$x_3 = 2.45 \quad x_4 = -2.45$$