

Laberinto

$$1. 7x^2 + 14x + 21 = 0$$

$$x^2 - 2x - 3 = 0$$

$$x^2 + x - 3x - 3 = 0$$

$$x + (x + 1) - 3x - 3 = 0$$

$$x + (x + 1) - 3(x + 1) = 0$$

$$(x + 1) \cdot (x - 3) = 0$$

$$x + 1 = 0$$

$$x - 3 = 0$$

$$x = -1$$

$$x = -1$$

$$x - 3 = 0$$

$$x = 3$$

$$2. 2x^2 - 14x + 24 = 0$$

$$x^2 - 7x + 12 = 0$$

$$x^2 - 3x - 4x + 12 = 0$$

$$x + (x-3) - 4x + 12 = 0$$

$$x + (x-3) - 4(x-3) = 0$$

$$(x-3) + (x-4) = 0$$

$$x-3=0 \quad x=3$$

$$x-4=0 \quad x=4$$

$$3. -7x^2 + 63 = 0$$

$$x^2 - 9 = 0$$

$$x^2 = 9$$

$$x = \pm \sqrt{9}$$

$$x = \pm 3$$

$$x = -3$$

$$x = 3$$

$$4. x^2 - 7x - 4 = 0$$

$$x = \frac{-(-7) \pm \sqrt{(-7)^2 - 4(x)(-4)}}{2(x)}$$

$$= \frac{-(-7) \pm \sqrt{(-7)^2 - 4 \times (-4)}}{2(x)}$$

$$= \frac{-(-7) \pm \sqrt{(-7)^2 - 4 \times (-4)}}{2}$$

$$= \frac{7 \pm \sqrt{(-7)^2 - 4 \times (-4)}}{2}$$

$$= \frac{7 \pm \sqrt{49 - 4 \times (-4)}}{2}$$

$$-4 \times (-4)$$

$$(-) \times (-) = (+)$$

$$4 \times 4 = 16$$

$$x = \frac{7 \pm \sqrt{49 + 16}}{2} = \frac{7 + \sqrt{65}}{2}$$

$$x = \frac{7 \pm \sqrt{65}}{2} = \frac{7 - \sqrt{65}}{2}$$

$$5. x^2 - 2x - 2 = 0$$

$$x = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \times 1 \times (-2)}}{2 \times 1}$$

$$x = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \times 1 \times (-2)}}{2 \times 1}$$

$$x = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \times 1 \times (-2)}}{2}$$

$$x = \frac{2 \pm \sqrt{(-2)^2 - 4 \times 1 \times (-2)}}{2}$$

$$x = \frac{2 \pm \sqrt{4 - 4 \times 1 \times (-2)}}{2}$$

$$x = \frac{2 \pm \sqrt{4 + 8}}{2}$$

$$x = \frac{2 \pm \sqrt{12}}{2} = \frac{2 + 2\sqrt{3}}{2}$$

$$x = \frac{2 \pm 2\sqrt{3}}{2} = \frac{2 - 2\sqrt{3}}{2}$$

$$x = 1 + \sqrt{3}$$

$$x = \frac{2 - 2\sqrt{3}}{2} = \frac{2(-\sqrt{3})}{2}$$

$$x = 1 - \sqrt{3}$$

$$6. 4x^2 - 24 = 0$$

$$x^2 - 6 = 0$$

$$x^2 = 6$$

$$x = \pm \sqrt{6}$$

$$7. 2x^2 - 6x - 2 = 4x - 3 = 0$$

$$2x^2 - 6 - 2 - 4x + 3 = 0$$

$$2x^2 - 10x - 2 + 3 = 0$$

$$2x^2 - 10x + 1 = 0$$

$$x = \frac{-(-10) \pm \sqrt{(-10)^2 - 4 \cdot 2 \cdot 1}}{2 \cdot 2}$$

$$x = \frac{-(-10) \pm \sqrt{(-10)^2 - 4x^2}}{2 \cdot 2}$$

$$x = \frac{-10 \pm \sqrt{(-10)^2 - 4x^2}}{2 \cdot 2}$$

$$x = \frac{10 \pm \sqrt{100 - 4x^2}}{2 \cdot 2}$$

$$x = \frac{10 \pm \sqrt{100 - 8}}{4}$$

$$x = \frac{10 \pm \sqrt{92}}{4}$$

$$x = \frac{10 \pm 2\sqrt{23}}{4}$$

Scribe

$$8. -14x^2 + 4 + 14 - 6x^2 = 0$$

$$-8x^2 + 4x + 14 = 0$$

$$4x^2 - 2x - 7 = 0$$

$$x = \frac{-(-2) \pm \sqrt{(-2)^2 - 4 \times 4 \times (-7)}}{2(4)}$$

$$x = \frac{2 \pm \sqrt{4 + 112}}{8}$$

$$x = \frac{2 \pm 2\sqrt{29}}{8}$$

$$x = \frac{1 \pm \sqrt{29}}{4}$$