

Résoudre dans IR :

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

$$-2x^2 + 5x - 3 = 0$$

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

$$2x^2 - 2\sqrt{2}x + 1 = 0$$

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

$$a = 1 \quad b = -5 \quad c = 4$$

$$\Delta = b^2 - 4ac = (-5)^2 - 4(1)(4) = 9$$

$$x_1 = \frac{-b + \sqrt{\Delta}}{2a} = \frac{+5 + 3}{2} = 4$$

$$x_2 = \frac{-b - \sqrt{\Delta}}{2a} = \frac{5 - 3}{2} = 1$$

$$-2x^2 + 5x - 3 = 0$$

$$a = -2 \quad b = 5 \quad c = -3$$

$$\Delta = b^2 - 4ac = (5)^2 - 4(-2)(-3) = 1$$

$$x_1 = \frac{-b + \sqrt{\Delta}}{2a} = \frac{-5 + 1}{2(-2)} = \frac{-4}{-4} = 1$$

$$x_2 = \frac{-b - \sqrt{\Delta}}{2a} = \frac{-5 - 1}{2(-2)} = \frac{-6}{-4} = \frac{3}{2}$$

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

$$\Delta = b^2 - 4ac = (3)^2 - 4(2)(4) = -23 < 0$$

$$S = \emptyset$$

$$2x^2 - 2\sqrt{2}x + 1 = 0$$

$$\Delta = b^2 - 4ac = (-2\sqrt{2})^2 - 4(2)(1) = 0$$

$$x_0 = -\frac{b}{2a} = \frac{2\sqrt{2}}{2(2)} = \frac{\sqrt{2}}{2}$$