

ECUACIONES POLINÓMICAS

1- Resolver, usando o método axeitado, as ecuacións polinómicas:

a) $(2x - 35)^2 - 4 = 0$

sol: $x = \frac{37}{2}$ $x = \frac{33}{2}$

b) $(5x + 22)^2 + 7 = 2$

sol: Non ten solucións reais.

c) $x^4 - 10x^2 + 9 = 0$

sol: $x = \pm 1$ $x = \pm 3$

d) $4x^4 - 17x^2 + 4 = 0$

sol: $x = \pm 2$ $x = \pm \frac{1}{2}$

e) $x^3 - x^2 - x + 1 = 0$

sol: $x = 1$ (dob) $x = -1$

f) $x^4 - x^3 - 16x^2 - 20x = 0$

sol: $x = 0$ $x = 5$ $x = -2$ (dob)

g) $x^4 - 2x^3 - 10x^2 + 4x + 16 = 0$

sol: $x = 4$ $x = 2$ $x = \pm\sqrt{2}$

h) $6x^5 - 17x^4 + 7x^3 + 8x^2 - 4x = 0$

sol: $x = 0$ $x = 1$ $x = 2$ $x = \frac{1}{2}$ $x = \frac{-2}{3}$

i) $(x - 3)^2 \cdot (2x + 5) \cdot (x^2 + x) = 0$

sol: $x = 0$ $x = -1$ $x = \frac{-5}{2}$ $x = 3$ (dob)

j) $(x - 1)^2 + 2(x - 2)^2 = x - 1$

sol: $x = 2$ $x = \frac{5}{3}$

k) $(x^2 - a) \cdot (x^2 + 2x - 3) = 0$

sol: $x = 1$ $x = -3$ $x = \pm\sqrt{a}$ si $a \geq 0$

ECUACIONES NON POLINÓMICAS

1- $\frac{x+1}{x^2+2x-3} - \frac{x}{x+3} = \frac{1}{x-1} + 1$

sol: $x = -1$ $x = \frac{1}{2}$

2- $\frac{3}{x^2-1} + \frac{2}{x-1} = 3$

sol: $x = 2$ $x = \frac{-4}{3}$

3- $\frac{2x}{x^2-4x+3} - \frac{x-1}{x^2-1} = \frac{2}{x^2-2x-3}$

sol: $x = -2 \pm \sqrt{5}$

$$4- \frac{x-3}{x^2-x-2} + \frac{1}{x-2} = 2 - \frac{1}{1+x}$$

$$\text{sol: } x = 0 \quad x = \frac{5}{2}$$

$$5- \sqrt{x^2 - 13} + x - 13 = 0$$

$$\text{sol: } x = 7$$

$$6- \sqrt{2x - 1} + x = 8$$

$$\text{sol: } x = 5$$

$$7- \sqrt{x + 1} = x - 1$$

$$\text{sol: } x = 3$$

$$8- \sqrt{9 + x} - 5 = \frac{2x+1}{3}$$

$$\text{sol: } x = -5$$

$$9- \frac{x}{\sqrt{x}-1} = \frac{\sqrt{x}+1}{2} + \frac{5}{2}$$

$$\text{sol: } x = 9 \quad x = 4$$