

Equations

POLYNÔMES

solutions max.

1 1^{er} degré

2 2^{ème} degré

3 3^{ème} degré

4 4^{ème} degré

Formules

Factorisation / Horner

$$2x + b = 0$$

$$2x^2 + bx + c = 0$$

$$2x^4 + bx^3 + cx^2 + dx + e = 0$$

1 inconnue

FRACTIONS DE POLYNÔMES

$\frac{?}{0}$ VERBODEN

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

$x \neq 0$
 $x \neq 3$

① À GAUCHE TOUTE

② 1 SEULE FRACTION

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

$$\frac{(x+2) \cdot x}{(x-3) \cdot x} - \frac{(x-3) \cdot 1}{(x-3) \cdot x} = 0$$

$$\frac{1}{4} - \frac{1}{5} =$$
$$\frac{1 \cdot 5}{4 \cdot 5} - \frac{4 \cdot 1}{4 \cdot 5} =$$

$$\frac{5}{20} - \frac{4}{20} = \frac{5-4}{20}$$

$$\frac{x^2 + 2x - x + 3}{(x-3) \cdot x} = 0$$

$$\frac{x^2 + x + 3}{(x-3) \cdot x} = 0$$

$$\Rightarrow 1x^2 + x + 3 = 0$$

$$\Delta = 1^2 - 4 \cdot 1 \cdot 3 = -11 < 0$$

$$x = \frac{-1 \pm \sqrt{1 - 12}}{2}$$

PAS DE SOL

$$4 \cdot (x+3) \frac{1}{(x+1)(x+3)} + \frac{1 \cdot 4 \cdot (x+1)}{(x+1)(x+3) \cdot 4} + \frac{3(x+1)(x+3)}{4(x+1)(x+3)} = 0$$

$$\frac{4(x+3) + 4(x+1) + 3(x+1)(x+3)}{(x+1)(x+3) \cdot 4} = 0$$

$$\frac{4x+12 + 4x+4 + 3(x^2+4x+3)}{(x+1)(x+3) \cdot 4} = 0$$

$$\Rightarrow 8x + 16 + 3x^2 + 12x + 9 = 0$$

$$3x^2 + 20x + 25 = 0$$

$$2 \cdot (\quad)$$

$$2 \cdot (2x - 1)$$

$$4x - 2$$

$$4x - 2 = 2(2x - 1)$$

$$\frac{3}{4} - \frac{2}{5}$$

$$\frac{3 \cdot 5}{4 \cdot 5} - \frac{4 \cdot 2}{4 \cdot 5}$$

$$\frac{2}{3} - \frac{1}{2} \neq \frac{1}{1}$$

$$\frac{2 \cdot 2 - 1 \cdot 3}{3 \cdot 2}$$

$$-\frac{2}{6} = \frac{-2}{6} = \frac{2}{-6} \neq \frac{-2}{-6} = \frac{2}{6}$$

$$2 \div 6$$

$$-2 \cdot 6 \neq -2 \cdot (-6)$$