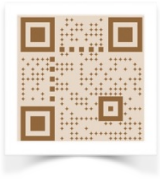


$$x^3 + 2x^2 - x - 2$$

$$x = \begin{cases} x = -1 \\ x = 1 \\ x = -2 \end{cases}$$



Teorema del factor

Podemos hacer

Ruffini

$$f(-1) = (-1)^3 + 2 \cdot (-1)^2 - (-1) - 2 = -1 + 2 + 1 - 2 = 0 \checkmark$$

	1	2	-1	-2
-1	↓	-1	-1	+2
	1	1	-2	0

Ruffini es bajar un grado al polinomio



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

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

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

$$\frac{-1 \pm \sqrt{(+1)^2 - 4 \cdot 1 \cdot (-2)}}{2 \cdot 1} = \frac{-1 \pm \sqrt{9}}{2} = \frac{-1 \pm 3}{2}$$

$$x^3 - 6x^2 + 3x + 10 = 0$$

$\left\{ \begin{array}{l} +10 \\ -10 \\ +5 \\ -5 \\ +2 \\ -2 \\ +1 \text{ XNO} \\ -1 \text{ VSI} \end{array} \right.$

Sol: $x = \begin{cases} x = -1 \\ x = 5 \\ x = 2 \end{cases}$

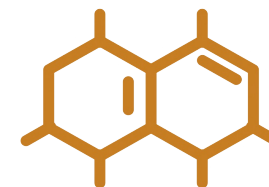


$$f(1) = (1)^3 - 6 \cdot (1)^2 + 3 \cdot (1) + 10 = +1 - 6 + 3 + 10 = 8 \rightarrow \text{NO}$$

$$f(-1) = (-1)^3 - 6 \cdot (-1)^2 + 3(-1) + 10 = -1 - 6 - 3 + 10 = 0 \rightarrow \text{SI}$$

	1	-6	3	10
-1	↓	-1	+7	-10
	1	-7	10	0

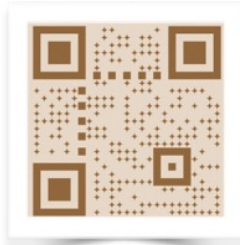
$$x^2 - 7x + 10 = 0 \begin{cases} x = 5 \\ x = 2 \end{cases}$$



**ACADEMIA
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$$c) \quad -2x^3 + 4x^2 + 18x - 36 = 0$$

$$f(2) = 0 \checkmark$$



- ± 36
- ± 4
- ± 9
- ± 3
- ± 2 ✓
- ± 1 ✗ No
- ± 6



	-2	+4	+18	-36
2	↓			
	-4	0	+36	
	-2	0	18	0

$$\hookrightarrow -2x^2 + 18 = 0$$

$$-2x^2 = -18$$

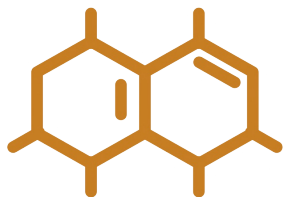
$$x^2 = \frac{-18}{-2}$$

$$\sqrt{x^2} = \sqrt{+9}$$

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

$$x = \pm 3$$

$$\text{Sol} \begin{cases} x = 2 \\ x = 3 \\ x = -3 \end{cases}$$



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TEMAS**