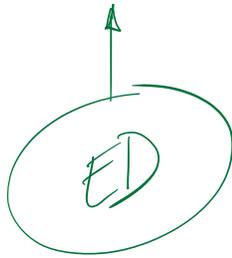Ensemble de définition

ED

EQUATION

S ensemble de solutions

Exemple 1

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

$$x^2 - x - 3 = 0 \qquad x = \frac{1 \pm \sqrt{1 + 12}}{2}$$

$$\boxed{\mathbb{ED} = \mathbb{R}}$$

Exemple 2

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

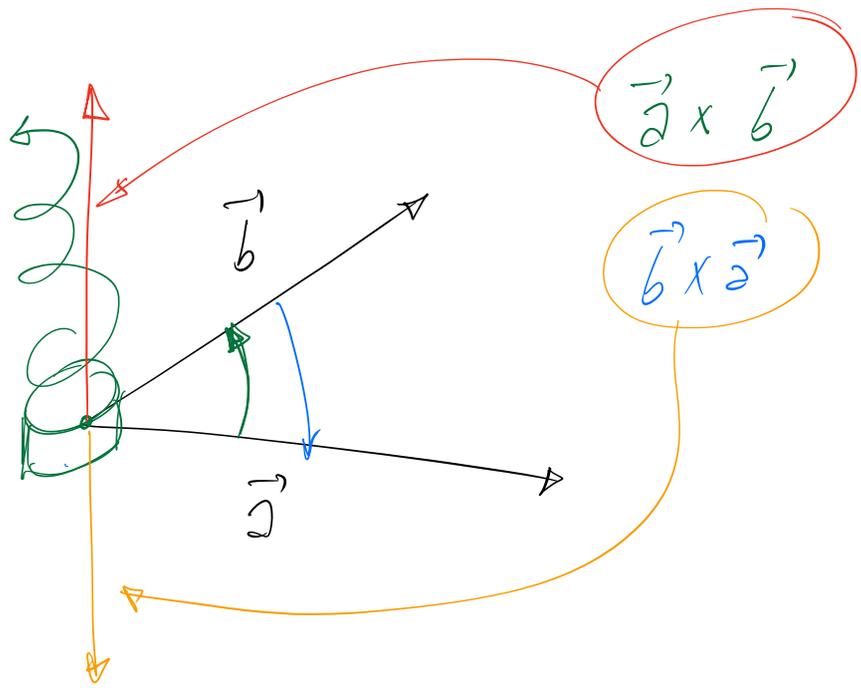$$\mathbb{ED} = \mathbb{R} - \{\pm\sqrt{2}; -1\}$$
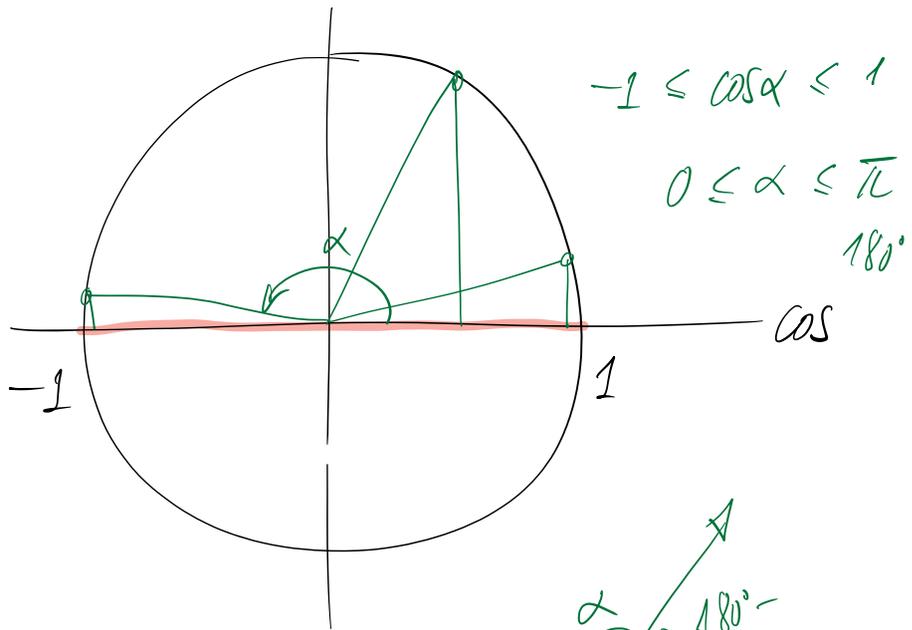
$$= \mathbb{R} \setminus \{\pm\sqrt{2}; -1\}$$

$$\frac{1}{(\sqrt{2})^2 - 2} \qquad \text{pas défini}$$

2.5.6 c)

$$x^4 + 2x^2 + 1 = (x^2 + 1)^2 = 0$$

$$\Leftrightarrow \quad x^2 + 1 = 0 \Leftrightarrow x^2 = -1 \Leftrightarrow x = \pm i \in \mathbb{C}$$
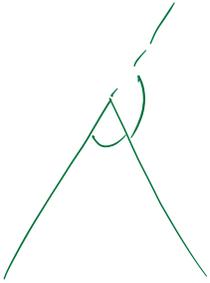
$$\vec{a} \times \vec{b}$$

$$\vec{b} \times \vec{a}$$

$-1 \leq \cos\alpha \leq 1$

$0 \leq \alpha \leq \overline{\pi}$

$180°$

$\cos$

-1

1

α

r

α

$180° -$

$$(x^2 - 5x + 6)^2 - 2(x^2 - 5x + 6) = 0$$

$$A^2 - 2A = 0$$

$$\Leftrightarrow A(A - 2) = 0$$

$$\Leftrightarrow A = 0 \quad ou \quad A = 2$$

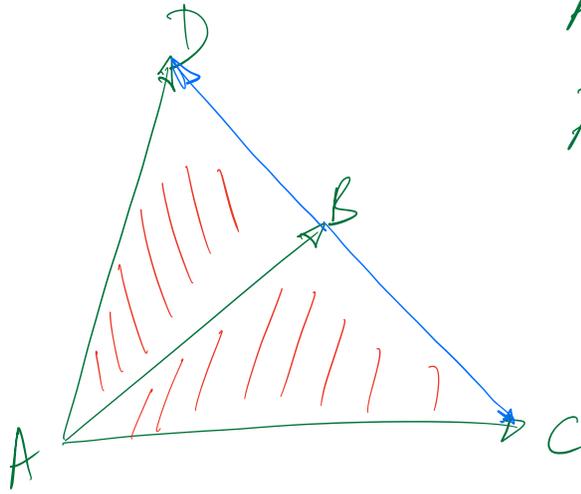$$x^2 - 5x + 6 = 0 \quad \begin{cases} x_1 \\ x_2 \end{cases}$$

$$x^2 - 5x + 6 = 2 \quad \begin{cases} x_3 \\ x_4 \end{cases}$$

$$x^3 + 3x^2 + 3x + 1 = (x+1)^3 = 0$$

$$(x+1)(x+1)(x+1) \qquad S = \{-1\}$$

1.5.6   a)

$$\vec{AB} \times \vec{AC}$$

$$\vec{AB} \times \vec{AD}$$

$$\vec{AB} \times \vec{BC}$$
$$\vec{AB} \times \vec{BD}$$

1.5.7   IDENTITÉ DE LAGRANGE

$$\|\vec{a}\|^2 \cdot \|\vec{b}\|^2 - \left(\vec{a} \cdot \vec{b}\right)^2 = \|\vec{a} \times \vec{b}\|^2$$