

conclusion de l'interno 2

exo 1

$$A = (2x)^2 + 2 \times 2x \times 3 + 3^2 - (2^2 - 2 \times 2x + x^2)$$

$$A = 4x^2 + 12x + 9 - 4 + 4x - x^2$$

$$A = 3x^2 + 16x + 5$$

$$B = \left(2x - \frac{1}{2}\right)^2$$

$$B = (2x)^2 - 2 \times 2x \times \frac{1}{2} + \left(\frac{1}{2}\right)^2$$

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

$$C = 3x - 6 - x^2 + 2x - (20 + 4x + 15x + 3x^2)$$

$$C = 3x - 6 - x^2 + 2x - 20 - 4x - 15x - 3x^2$$

$$C = -4x^2 - 14x - 26$$

$$D = z^2 - z^2 - x + z^2$$

$$D = 4 - x$$

exo 2

$$A = (5x-1)[(3+2x)-(x-4)]$$

$$A = (5x-1)(3+2x-x+4)$$

$$A = (5x-1)(x+7)$$

$$B = (3x-1)[(3x-1)+(2x+3)]$$

$$B = (3x-1)(5x+2)$$

$$C = (4+x)(x+7-1)$$

$$C = (4+x)(x+6)$$

$$D = [(2x+3)+(3x-1)][(2x+3)-(3x-1)]$$

$$D = (2x+3+3x-1)(2x+3-3x+1)$$

$$D = (5x+2)(-x+4)$$

exo 3

$$A = \frac{3}{\sqrt{11}-\sqrt{7}}$$

$$B = \frac{1}{\sqrt{3}+\sqrt{2}}$$

$$A = \frac{3(\sqrt{11}+\sqrt{7})}{(\sqrt{11})^2-\sqrt{7}^2}$$

$$B = \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}^2-\sqrt{2}^2}$$

$$A = \frac{3(\sqrt{11}+\sqrt{7})}{11-7}$$

$$B = \frac{\sqrt{3}-\sqrt{2}}{3-2}$$

$$A = \frac{3}{4}(\sqrt{11}+\sqrt{7})$$

$$B = \sqrt{3}-\sqrt{2}$$

$$C = \frac{1}{\sqrt{13}+\sqrt{11}} + \frac{1}{\sqrt{13}-\sqrt{11}}$$

$$D = \frac{1}{\sqrt{a+2}-\sqrt{a}} - \frac{1}{\sqrt{a+2}+\sqrt{a}}$$

$$C = \frac{\sqrt{13}-\sqrt{11}}{\sqrt{13}^2-\sqrt{11}^2} + \frac{\sqrt{13}+\sqrt{11}}{\sqrt{13}^2-\sqrt{11}^2}$$

$$D = \frac{\sqrt{a+2}+\sqrt{a}}{\sqrt{a+2}^2-\sqrt{a}^2} - \frac{\sqrt{a+2}-\sqrt{a}}{\sqrt{a+2}^2-\sqrt{a}^2}$$

$$C = \frac{\sqrt{13}-\sqrt{11}}{2} + \frac{\sqrt{13}+\sqrt{11}}{2}$$

$$D = \frac{\sqrt{a+2}+\sqrt{a}}{a+2-a} - \frac{\sqrt{a+2}-\sqrt{a}}{a+2-a}$$

$$C = \frac{2\sqrt{13}}{2}$$

$$D = \frac{\sqrt{a+2}+\sqrt{a}-\sqrt{a+2}+\sqrt{a}}{2}$$

$$C = \sqrt{13}$$

$$D = \frac{2\sqrt{a}}{2}$$

$$D = \sqrt{a}$$

ex04

$$\begin{aligned} 1. \quad A - B &= (a+b)^2 - 2ab \\ &= a^2 + 2ab + b^2 - 2ab \\ &= a^2 + b^2 > 0 \quad \text{car un carré est positif.} \end{aligned}$$

$$\begin{aligned} \text{Dmc} \quad A - B &> 0 \\ A &> B. \end{aligned}$$

$$2. \quad A = \frac{x}{x+1} \quad \cdot \quad B = \frac{x-1}{x} \quad x > 0$$

$$\begin{aligned} A - B &= \frac{x}{x+1} - \frac{x-1}{x} \\ &= \frac{x^2}{x(x+1)} - \frac{(x-1)(x+1)}{x(x+1)} \end{aligned}$$

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

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

$$= \frac{1}{x(x+1)} \quad \text{or } x > 0 \quad \text{dmc } x+1 > 0$$

$$\begin{aligned} \text{Dmc} \quad A - B &> 0 \\ A &> B \end{aligned}$$

$$\begin{aligned} 3. \quad A - B &= ab+4 - (a+2)(b+2) \\ &= ab+4 - (ab+2a+2b+4) \\ &= ab+4 - ab - 2a - 2b - 4 \\ &= -2(a+b) \end{aligned}$$

$$\text{or } a < 0 \quad \text{et } b < 0$$

$$\text{Dmc } a+b < 0$$

$$\text{et comme } -2 < 0$$

$$\text{alors } -2(a+b) > 0$$

$$\text{Dmc } A - B > 0$$

$$\text{et } A > B$$