

CHAPITRE 0 : RENTRÉE

Correction

On peut écrire

$$\begin{aligned} I &= 6 - 6x + 3x(x - 1) - x(x - 1)(x - 2) \\ &= -6(x - 1) + 3x(x - 1) - x(x - 1)(x - 2) \\ &= (x - 1)[-6 + 3x - x(x - 2)] \\ &= (x - 1)(3(x - 2) - x(x - 2)) \\ &= -(x - 1)(x - 2)(x - 3) \end{aligned}$$

et

$$\begin{aligned} J &= 4a^2b^2 - (a^2 + b^2 - c^2)^2 \\ &= (2ab + a^2 + b^2 - c^2)(2ab - (a^2 + b^2 - c^2)) \\ &= -(a^2 + 2ab + b^2 - c^2)(a^2 - 2ab + b^2 - c^2) \\ &= -[(a + b)^2 - c^2][(a - b)^2 - c^2] \\ &= -(a + b + c)(a + b - c)(a - b + c)(a - b - c). \end{aligned}$$