

Je me prépare à l'évaluation

201 1. Faux.

$$\begin{aligned}\sqrt{18} + \sqrt{32} - \sqrt{50} &= \sqrt{9 \times 2} + \sqrt{16 \times 2} - \sqrt{25 \times 2} \\ \sqrt{18} + \sqrt{32} - \sqrt{50} &= \sqrt{9} \times \sqrt{2} + \sqrt{16} \times \sqrt{2} - \sqrt{25} \times \sqrt{2} \\ \sqrt{18} + \sqrt{32} - \sqrt{50} &= 3\sqrt{2} + 4\sqrt{2} - 5\sqrt{2} \\ \sqrt{18} + \sqrt{32} - \sqrt{50} &= (3 + 4 - 5)\sqrt{2} \\ \sqrt{18} + \sqrt{32} - \sqrt{50} &= 2\sqrt{2} \neq 0\end{aligned}$$

2. Vrai.

$$\begin{aligned}\sqrt{27} + \sqrt{12} - \sqrt{48} &= \sqrt{9 \times 3} + \sqrt{4 \times 3} - \sqrt{16 \times 3} \\ \sqrt{27} + \sqrt{12} - \sqrt{48} &= \sqrt{9} \times \sqrt{3} + \sqrt{4} \times \sqrt{3} - \sqrt{16} \times \sqrt{3} \\ \sqrt{27} + \sqrt{12} - \sqrt{48} &= 3\sqrt{3} + 2\sqrt{3} - 4\sqrt{3} \\ \sqrt{27} + \sqrt{12} - \sqrt{48} &= (3 + 2 - 4)\sqrt{3} = \sqrt{3}\end{aligned}$$

3. Faux.

$$\begin{aligned}(1 + \sqrt{3})^2 &= 1^2 + 2 \times 1 \times \sqrt{3} + (\sqrt{3})^2 \\ (1 + \sqrt{3})^2 &= 1 + 2\sqrt{3} + 3 \\ (1 + \sqrt{3})^2 &= 4 + 2\sqrt{3} \neq 4\end{aligned}$$