

Exercice 2

- Calculer le module de $z_1 = (1+2i)^5$

$$\begin{aligned}|z_1| &= (\sqrt{z_1 \times \overline{z_1}})^5 \\ &= \sqrt{1+4}^5 = \sqrt{5}^5\end{aligned}$$

- Calculer le module de $z_2 = \frac{(3+4i)}{(5-i)^3}$

$$\begin{aligned}|z_2| &= \frac{|3+4i|}{(5-i)^3} \\ &= \frac{\sqrt{9+16}}{\sqrt{25+1}^3} = \frac{5}{\sqrt{26}^3} = \frac{5}{26\sqrt{26}}\end{aligned}$$