

Exercice 31 : formes algébriques de nombres complexes

Déterminer les formes algébriques des nombres complexes donnés.

$$1. a = 2 + 2i - 3i - 3 \quad 2. b = 1 + i - \left(\frac{1}{3} + \frac{2}{3}i\right)$$

$$3. c = -2 + 3i - (3 - 3i) \quad 4. d = \frac{5}{2} + \frac{3}{2}i - \left(-\frac{5}{2} - \frac{3}{2}i\right)$$

$$1. a = -(1 + i) + 2i\left(-\frac{1}{2} + i\right)$$

$$2. b = 2i(1 - i) - 3i(1 + i)$$

$$3. c = -\sqrt{2}(\sqrt{2} - 2i\sqrt{2}) - \sqrt{3}(i\sqrt{3} - 2\sqrt{3})$$

$$4. d = i\sqrt{2}(2\sqrt{2} - i) + 2i\sqrt{3}(i - \sqrt{3})$$

$$1. a = (2 + i)(1 + 3i) \quad 2. b = \left(\frac{3}{2} - 2i\right)\left(2 + \frac{3}{2}i\right)$$

$$3. c = \left(-\frac{1}{2} - \frac{1}{2}i\right)(1 + 2i) \quad 4. d = \left(-\frac{2}{3} - i\right)(3 - 4i)$$

$$1. a = (3 + 5i)^2$$

$$2. b = \left(3i - \frac{1}{3}\right)^2$$

$$3. c = (2 + 3i)(2 - 3i)$$

$$4. d = (i\sqrt{3} + \sqrt{2})(\sqrt{2} - i\sqrt{3})$$