Les nombres complexes

Exercice 31 : formes algébriques de nombres complexes

Déterminer les formes algébriques des nombres complexes donnés.

1.
$$a = 2 + 2i - 3i - 3$$

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

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

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

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

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

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

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

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

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

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

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