Exercice 11 page 249

Sésamath

Maths TS obligatoire

énoncé

Calculer les expressions suivantes, donner le résultat sous forme algébrique :

1. $2(1+2\mathrm{i})$
2. $\mathrm{i}(3+\mathrm{i})$
3. $2\mathrm{i}(3-2\mathrm{i})$
4. $(1+2\mathrm{i})(-2-2\mathrm{i})$

correction

1

$$2(1+2\mathrm{i})$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\mathrm{i}(3+\mathrm{i})$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\mathrm{i}(3+\mathrm{i}) = 3\mathrm{i}+\mathrm{i}^2$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\end{aligned}$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\\ &= -1+3\mathrm{i}\end{aligned}$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\\ &= -1+3\mathrm{i}\end{aligned}$$

3

$$2\mathrm{i}(3-2\mathrm{i})$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\\ &= -1+3\mathrm{i}\end{aligned}$$

3

$$2\mathrm{i}(3-2\mathrm{i}) = 6\mathrm{i}-4\mathrm{i}^2$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\\ &= -1+3\mathrm{i}\end{aligned}$$

3

$$\begin{aligned}2\mathrm{i}(3-2\mathrm{i}) &= 6\mathrm{i}-4\mathrm{i}^2\\ &= 6\mathrm{i}-4\times(-1)\end{aligned}$$

correction

1

$$2(1+2\mathrm{i}) = 2+4\mathrm{i}$$

2

$$\begin{aligned}\mathrm{i}(3+\mathrm{i}) &= 3\mathrm{i}+\mathrm{i}^2\\ &= 3\mathrm{i}-1\\ &= -1+3\mathrm{i}\end{aligned}$$

3

$$\begin{aligned}2\mathrm{i}(3-2\mathrm{i}) &= 6\mathrm{i}-4\mathrm{i}^2\\ &= 6\mathrm{i}-4\times(-1)\\ &= 4+6\mathrm{i}\end{aligned}$$

correction

4

$$(1+2\mathrm{i})(-2-2\mathrm{i})$$

correction

4

$$(1+2\mathrm{i})(-2-2\mathrm{i}) = -2-2\mathrm{i}-4\mathrm{i}-4\mathrm{i}^2$$

correction

4

$$\begin{aligned}(1+2\mathrm{i})(-2-2\mathrm{i}) &= -2-2\mathrm{i}-4\mathrm{i}-4\mathrm{i}^2\\ &= -2-6\mathrm{i}-4\times(-1)\end{aligned}$$

correction

4

$$\begin{aligned}(1+2\mathrm{i})(-2-2\mathrm{i}) &= -2-2\mathrm{i}-4\mathrm{i}-4\mathrm{i}^2\\ &= -2-6\mathrm{i}-4\times(-1)\\ &= 2-6\mathrm{i}\end{aligned}$$