

Exercices

Exercice 1

Réduire, si possible, les expressions suivantes.

1. $A = 2x \times 11$

2. $B = -9x - 9$

3. $C = -4x + 0$

4. $D = -11 \times 2x$

5. $E = -6x + x$

6. $F = 4x \times 0$

7. $G = 8x^2 - 8x^2$

8. $H = (-10x) \times (-4x)$

9. $I = (-11x^2) \times x$

10. $J = 8x + 8x$

Exercice 2

Développer les expressions suivantes.

1. $A = 11(-4y + 5)$

4. $D = 10(-5a - 2)$

2. $B = (-3a - 7) \times 9$

5. $E = (t - 4) \times 5$

3. $C = (4c - 5) \times 2$

6. $F = 2(-8y - 5)$

Exercice 3

Factoriser les expressions suivantes.

1. $A = -6a + 20b$

5. $E = 18a + 20b$

2. $B = 49a - 56b$

6. $F = 22a - 99b$

3. $C = 45a - 50b$

7. $G = -12a - 14b$

4. $D = 6a + 21b$

8. $H = 56a + 63b$

Exercice 4

Développer et réduire les expressions suivantes.

1. $A = (6x + 5)(5x + 8)$

4. $D = (7x - 3)(3x - 4)$

2. $B = (x + 9)(x + 12)$

5. $E = (x + 3)(x + 2)$

3. $C = (9x - 3)(8x + 7)$

6. $F = (9x - 3)(3x - 7)$

Exercices

Exercice 1

Réduire, si possible, les expressions suivantes.

1. $A = -4 - 6x$

2. $B = -4x - 5x$

3. $C = -9x + 2$

4. $D = 6x^2 \times x$

5. $E = -7 \times (-6x)$

6. $F = 11x^2 - 11x^2$

7. $G = 3x - 3$

8. $H = -3x \times 0$

9. $I = 3x \times 11x$

10. $J = 8x + 0$

Exercice 2

Développer les expressions suivantes.

1. $A = 10(-c + 4)$

2. $B = (-7a + 5) \times 6$

3. $C = 8(-7c - 9)$

4. $D = (2y + 5) \times 11$

5. $E = (8y + 2) \times 3$

6. $F = 6(-7x + 5)$

Exercice 3

Factoriser les expressions suivantes.

1. $A = 10a - 16b$

2. $B = 40a + 45b$

3. $C = 27a + 30b$

4. $D = 14a - 16b$

5. $E = -55a - 88b$

6. $F = -16a + 18b$

7. $G = -27a - 30b$

8. $H = 55a + 88b$

Exercice 4

Développer et réduire les expressions suivantes.

1. $A = (x + 2)(x + 5)$

2. $B = (7x - 5)(9x - 3)$

3. $C = (4x - 2)(7x + 7)$

4. $D = (5x + 8)(4x + 7)$

5. $E = (8x - 6)(3x - 3)$

6. $F = (6x - 5)(7x + 3)$

Exercices**Exercice 1**

1. $A = 2x \times 11 = 22x$
2. $B = -9x - 9$
3. $C = -4x + 0 = -4x$
4. $D = -11 \times 2x = -22x$
5. $E = -6x + x = -5x$
6. $F = 4x \times 0 = 0$
7. $G = 8x^2 - 8x^2 = 0$
8. $H = (-10x) \times (-4x) = 40x^2$
9. $I = (-11x^2) \times x = (-11x^3)$
10. $J = 8x + 8x = 16x$

Exercice 2

1. $A = 11(-4y + 5)$
 $A = 11 \times (-4y) + 11 \times 5$
Et si on réduit l'expression, on obtient :
 $A = -44y + 55$.
2. $B = (-3a - 7) \times 9$
 $B = 9 \times (-3a) + 9 \times (-7)$
Et si on réduit l'expression, on obtient :
 $B = -27a - 63$.
3. $C = (4c - 5) \times 2$
 $C = 2 \times 4c + 2 \times (-5)$
Et si on réduit l'expression, on obtient :
 $C = 8c - 10$.
4. $D = 10(-5a - 2)$
 $D = 10 \times (-5a) + 10 \times (-2)$
Et si on réduit l'expression, on obtient :
 $D = -50a - 20$.
5. $E = (t - 4) \times 5$
 $E = 5 \times t + 5 \times (-4)$
Et si on réduit l'expression, on obtient :
 $E = 5t - 20$.
6. $F = 2(-8y - 5)$
 $F = 2 \times (-8y) + 2 \times (-5)$
Et si on réduit l'expression, on obtient :
 $F = -16y - 10$.

Exercices

Exercice 3

$$\begin{aligned} 1. A &= -6a + 20b \\ &= 2 \times (-3a) + 2 \times 10b \\ &= 2(-3a + 10b) \end{aligned}$$

$$\begin{aligned} 2. B &= 49a - 56b \\ &= 7 \times 7a - 7 \times 8b \\ &= 7(7a - 8b) \end{aligned}$$

$$\begin{aligned} 3. C &= 45a - 50b \\ &= 5 \times 9a - 5 \times 10b \\ &= 5(9a - 10b) \end{aligned}$$

$$\begin{aligned} 4. D &= 6a + 21b \\ &= 3 \times 2a + 3 \times 7b \\ &= 3(2a + 7b) \end{aligned}$$

$$\begin{aligned} 5. E &= 18a + 20b \\ &= 2 \times 9a + 2 \times 10b \\ &= 2(9a + 10b) \end{aligned}$$

$$\begin{aligned} 6. F &= 22a - 99b \\ &= 11 \times 2a - 11 \times 9b \\ &= 11(2a - 9b) \end{aligned}$$

$$\begin{aligned} 7. G &= -12a - 14b \\ &= 2 \times (-6)a - 2 \times 7b \\ &= 2(-6a - 7b) \end{aligned}$$

$$\begin{aligned} 8. H &= 56a + 63b \\ &= 7 \times 8a + 7 \times 9b \\ &= 7(8a + 9b) \end{aligned}$$

Exercice 4

$$\begin{aligned} 1. A &= (6x + 5)(5x + 8) \\ A &= 30x^2 + 48x + 25x + 40 \\ A &= 30x^2 + 73x + 40 \end{aligned}$$

$$\begin{aligned} 2. B &= (x + 9)(x + 12) \\ B &= x^2 + 9x + 12x + 108 \\ B &= x^2 + 21x + 108 \end{aligned}$$

$$\begin{aligned} 3. C &= (9x - 3)(8x + 7) \\ C &= 72x^2 + 63x - 24x - 21 \\ C &= 72x^2 + 39x - 21 \end{aligned}$$

$$\begin{aligned} 4. D &= (7x - 3)(3x - 4) \\ D &= 21x^2 - 28x - 9x + 12 \\ D &= 21x^2 - 37x + 12 \end{aligned}$$

$$\begin{aligned} 5. E &= (x + 3)(x + 2) \\ E &= x^2 + 3x + 2x + 6 \\ E &= x^2 + 5x + 6 \end{aligned}$$

$$\begin{aligned} 6. F &= (9x - 3)(3x - 7) \\ F &= 27x^2 - 63x - 9x + 21 \\ F &= 27x^2 - 72x + 21 \end{aligned}$$

Exercices

Exercice 1

1. $A = -4 - 6x$
2. $B = -4x - 5x = -9x$
3. $C = -9x + 2$
4. $D = 6x^2 \times x = 6x^3$
5. $E = -7 \times (-6x) = 42x$
6. $F = 11x^2 - 11x^2 = 0$
7. $G = 3x - 3$
8. $H = -3x \times 0 = 0$
9. $I = 3x \times 11x = 33x^2$
10. $J = 8x + 0 = 8x$

Exercice 2

1. $A = 10(-c + 4)$
 $A = 10 \times (-c) + 10 \times 4$
Et si on réduit l'expression, on obtient :
 $A = -10c + 40$.
2. $B = (-7a + 5) \times 6$
 $B = 6 \times (-7a) + 6 \times 5$
Et si on réduit l'expression, on obtient :
 $B = -42a + 30$.
3. $C = 8(-7c - 9)$
 $C = 8 \times (-7c) + 8 \times (-9)$
Et si on réduit l'expression, on obtient :
 $C = -56c - 72$.
4. $D = (2y + 5) \times 11$
 $D = 11 \times 2y + 11 \times 5$
Et si on réduit l'expression, on obtient :
 $D = 22y + 55$.
5. $E = (8y + 2) \times 3$
 $E = 3 \times 8y + 3 \times 2$
Et si on réduit l'expression, on obtient :
 $E = 24y + 6$.
6. $F = 6(-7x + 5)$
 $F = 6 \times (-7x) + 6 \times 5$
Et si on réduit l'expression, on obtient :
 $F = -42x + 30$.

Exercices

Exercice 3

$$\begin{aligned} 1. A &= 10a - 16b \\ &= 2 \times 5a - 2 \times 8b \\ &= 2(5a - 8b) \end{aligned}$$

$$\begin{aligned} 2. B &= 40a + 45b \\ &= 5 \times 8a + 5 \times 9b \\ &= 5(8a + 9b) \end{aligned}$$

$$\begin{aligned} 3. C &= 27a + 30b \\ &= 3 \times 9a + 3 \times 10b \\ &= 3(9a + 10b) \end{aligned}$$

$$\begin{aligned} 4. D &= 14a - 16b \\ &= 2 \times 7a - 2 \times 8b \\ &= 2(7a - 8b) \end{aligned}$$

$$\begin{aligned} 5. E &= -55a - 88b \\ &= 11 \times (-5)a - 11 \times 8b \\ &= 11(-5a - 8b) \end{aligned}$$

$$\begin{aligned} 6. F &= -16a + 18b \\ &= 2 \times (-8a) + 2 \times 9b \\ &= 2(-8a + 9b) \end{aligned}$$

$$\begin{aligned} 7. G &= -27a - 30b \\ &= 3 \times (-9)a - 3 \times 10b \\ &= 3(-9a - 10b) \end{aligned}$$

$$\begin{aligned} 8. H &= 55a + 88b \\ &= 11 \times 5a + 11 \times 8b \\ &= 11(5a + 8b) \end{aligned}$$

Exercice 4

$$\begin{aligned} 1. A &= (x + 2)(x + 5) \\ A &= x^2 + 2x + 5x + 10 \\ A &= x^2 + 7x + 10 \end{aligned}$$

$$\begin{aligned} 2. B &= (7x - 5)(9x - 3) \\ B &= 63x^2 - 21x - 45x + 15 \\ B &= 63x^2 - 66x + 15 \end{aligned}$$

$$\begin{aligned} 3. C &= (4x - 2)(7x + 7) \\ C &= 28x^2 + 28x - 14x - 14 \\ C &= 28x^2 + 14x - 14 \end{aligned}$$

$$\begin{aligned} 4. D &= (5x + 8)(4x + 7) \\ D &= 20x^2 + 35x + 32x + 56 \\ D &= 20x^2 + 67x + 56 \end{aligned}$$

$$\begin{aligned} 5. E &= (8x - 6)(3x - 3) \\ E &= 24x^2 - 24x - 18x + 18 \\ E &= 24x^2 - 42x + 18 \end{aligned}$$

$$\begin{aligned} 6. F &= (6x - 5)(7x + 3) \\ F &= 42x^2 + 18x - 35x - 15 \\ F &= 42x^2 - 17x - 15 \end{aligned}$$