Calcul littéral - Double distributivité

Exercice 1

Développer et réduire les expressions suivantes.

$A = (4x+8)(9x+9)$ $C = (6x+5)(8x+2)$ $E = (x+5)(x+4)$

$B = (x+7)(x+9)$ $D = (x+4)(x+7)$ $F = (8x+3)(3x+6)$

Exercice 2

Développer et réduire les expressions suivantes.

$A = (x+3)(x+12)$ $C = (6x+4)(3x+7)$ $E = (x+3)(x+8)$

$B = (3x+5)(2x+6)$ $D = (x+10)(x+3)$ $F = (6x+5)(2x+9)$

Exercice 3

Développer et réduire les expressions suivantes.

$A = (6x-9)(3x-3)$ $C = (9x-2)(6x+6)$ $E = (3x-5)(9x-9)$

$B = (7x-9)(9x+5)$ $D = (8x-5)(7x-8)$ $F = (4x-3)(8x+5)$

Exercice 4

Développer et réduire les expressions suivantes.

$A = (1-8b)^2$ $C = (z+11)^2$

$B = (3z-3)^2$ $D = (7+4x)^2$

Exercice 5

Développer et réduire les expressions suivantes.

$A = (y-9)(y+9)$ $C = (b-3)(b+3)$ $E = (x-4)(x+4)$

$B = (y-5)(y+5)$ $D = (z-1)(z+1)$ $F = (z-6)(z+6)$

Exercice 6

Développer et réduire les expressions suivantes.

$A = (8y-1)(8y+1)$ $C = (5x-9)(5x+9)$ $E = (4c-3)(4c+3)$

$B = (3c-1)(3c+1)$ $D = (6a-2)(6a+2)$ $F = (9y-1)(9y+1)$

Calcul littéral - Double distributivité **V2**

Exercice 1

Développer et réduire les expressions suivantes.

$A = (3x+6)(4x+7)$ $C = (5x+9)(3x+3)$ $E = (x+10)(x+12)$

$B = (x+4)(x+11)$ $D = (x+4)(x+10)$ $F = (8x+5)(6x+8)$

Exercice 2

Développer et réduire les expressions suivantes.

$A = (7x+7)(9x+4)$ $C = (x+10)(x+4)$ $E = (x+10)(x+9)$

$B = (x+4)(x+7)$ $D = (6x+8)(2x+6)$ $F = (2x+8)(5x+7)$

Exercice 3

Développer et réduire les expressions suivantes.

$A = (3x-2)(4x+6)$ $C = (3x-5)(9x+9)$ $E = (7x-5)(5x-3)$

$B = (8x-7)(6x-4)$ $D = (8x-8)(6x-4)$ $F = (2x-8)(8x+6)$

Exercice 4

Développer et réduire les expressions suivantes.

$A = (4-6z)^2$ $C = (7x+10)^2$

$B = (10+9z)^2$ $D = (3y-7)^2$

Exercice 5

Développer et réduire les expressions suivantes.

$A = (c-7)(c+7)$ $C = (a-9)(a+9)$ $E = (x-2)(x+2)$

$B = (y-6)(y+6)$ $D = (c-4)(c+4)$ $F = (a-8)(a+8)$

Exercice 6

Développer et réduire les expressions suivantes.

$A = (3y-5)(3y+5)$ $C = (8z-7)(8z+7)$ $E = (8z-8)(8z+8)$

$B = (4z-8)(4z+8)$ $D = (9c-6)(9c+6)$ $F = (4b-6)(4b+6)$

Exercice 1

1. $A = (4x + 8)(9x + 9)$
$A = 36x^2 + 36x + 72x + 72$
$A = \mathbf{36x^2 + 108x + 72}$

2. $B = (x + 7)(x + 9)$
$B = x^2 + 7x + 9x + 63$
$B = \mathbf{x^2 + 16x + 63}$

3. $C = (6x + 5)(8x + 2)$
$C = 48x^2 + 12x + 40x + 10$
$C = \mathbf{48x^2 + 52x + 10}$

4. $D = (x + 4)(x + 7)$
$D = x^2 + 4x + 7x + 28$
$D = \mathbf{x^2 + 11x + 28}$

5. $E = (x + 5)(x + 4)$
$E = x^2 + 5x + 4x + 20$
$E = \mathbf{x^2 + 9x + 20}$

6. $F = (8x + 3)(3x + 6)$
$F = 24x^2 + 48x + 9x + 18$
$F = \mathbf{24x^2 + 57x + 18}$

Exercice 2

1. $A = (x + 3)(x + 12)$
$A = x^2 + 3x + 12x + 36$
$A = \mathbf{x^2 + 15x + 36}$

2. $B = (3x + 5)(2x + 6)$
$B = 6x^2 + 18x + 10x + 30$
$B = \mathbf{6x^2 + 28x + 30}$

3. $C = (6x + 4)(3x + 7)$
$C = 18x^2 + 42x + 12x + 28$
$C = \mathbf{18x^2 + 54x + 28}$

4. $D = (x + 10)(x + 3)$
$D = x^2 + 10x + 3x + 30$
$D = \mathbf{x^2 + 13x + 30}$

5. $E = (x + 3)(x + 8)$
$E = x^2 + 3x + 8x + 24$
$E = \mathbf{x^2 + 11x + 24}$

6. $F = (6x + 5)(2x + 9)$
$F = 12x^2 + 54x + 10x + 45$
$F = \mathbf{12x^2 + 64x + 45}$

Exercice 3

1. $A = (6x-9)(3x-3)$
$A = 18x^2 - 18x - 27x + 27$
$A = \mathbf{18x^2 - 45x + 27}$

2. $B = (7x-9)(9x+5)$
$B = 63x^2 + 35x - 81x - 45$
$B = \mathbf{63x^2 - 46x - 45}$

3. $C = (9x-2)(6x+6)$
$C = 54x^2 + 54x - 12x - 12$
$C = \mathbf{54x^2 + 42x - 12}$

4. $D = (8x-5)(7x-8)$
$D = 56x^2 - 64x - 35x + 40$
$D = \mathbf{56x^2 - 99x + 40}$

5. $E = (3x-5)(9x-9)$
$E = 27x^2 - 27x - 45x + 45$
$E = \mathbf{27x^2 - 72x + 45}$

6. $F = (4x-3)(8x+5)$
$F = 32x^2 + 20x - 24x - 15$
$F = \mathbf{32x^2 - 4x - 15}$

Exercice 4

1. $A = (1-8b)^2$
$A = (1-8b)(1-8b)$
$A = 1 \times 1 + 1 \times (-8b) + (-8b) \times 1 + (-8b) \times (-8b)$
$A = 1 - 8b - 8b + 64b^2$
$A = 64b^2 - 16b + 1$

2. $B = (3z-3)^2$
$B = (3z-3)(3z-3)$
$B = 3z \times 3z + 3z \times (-3) + (-3) \times 3z + (-3) \times (-3)$
$B = 9z^2 - 9z - 9z + 9$
$B = 9z^2 - 18z + 9$

3. $C = (z+11)^2$
$C = (z+11)(z+11)$
$C = z \times z + z \times 11 + 11 \times z + 11 \times 11$
$C = z^2 + 11z + 11z + 121$
$C = z^2 + 22z + 121$

4. $D = (7+4x)^2$
$D = (7+4x)(7+4x)$
$D = 7 \times 7 + 7 \times 4x + 4x \times 7 + 4x \times 4x$
$D = 49 + 28x + 28x + 16x^2$
$D = 16x^2 + 56x + 49$

Exercice 5

1. $A = (y-9)(y+9)$
$A = y^2 - 9^2$
$A = y^2 - 81$

2. $B = (y-5)(y+5)$
$B = y^2 - 5^2$
$B = y^2 - 25$

3. $C = (b-3)(b+3)$
$C = b^2 - 3^2$
$C = b^2 - 9$

4. $D = (z-1)(z+1)$
$D = z^2 - 1^2$
$D = z^2 - 1$

5. $E = (x-4)(x+4)$
$E = x^2 - 4^2$
$E = x^2 - 16$

6. $F = (z-6)(z+6)$
$F = z^2 - 6^2$
$F = z^2 - 36$

Exercice 6

1. $A = (8y-1)(8y+1)$
$A = (8y)^2 - 1^2$
$A = 64y^2 - 1$

2. $B = (3c-1)(3c+1)$
$B = (3c)^2 - 1^2$
$B = 9c^2 - 1$

3. $C = (5x-9)(5x+9)$
$C = (5x)^2 - 9^2$
$C = 25x^2 - 81$

4. $D = (6a-2)(6a+2)$
$D = (6a)^2 - 2^2$
$D = 36a^2 - 4$

5. $E = (4c-3)(4c+3)$

$E = (4c)^2 - 3^2$
$E = 16c^2 - 9$

6. $F = (9y - 1)(9y + 1)$
$F = (9y)^2 - 1^2$
$F = 81y^2 - 1$

Exercice 1

1. $A = (3x + 6)(4x + 7)$
$A = 12x^2 + 21x + 24x + 42$
$A = \mathbf{12x^2 + 45x + 42}$

2. $B = (x + 4)(x + 11)$
$B = x^2 + 4x + 11x + 44$
$B = \mathbf{x^2 + 15x + 44}$

3. $C = (5x + 9)(3x + 3)$
$C = 15x^2 + 15x + 27x + 27$
$C = \mathbf{15x^2 + 42x + 27}$

4. $D = (x + 4)(x + 10)$
$D = x^2 + 4x + 10x + 40$
$D = \mathbf{x^2 + 14x + 40}$

5. $E = (x + 10)(x + 12)$
$E = x^2 + 10x + 12x + 120$
$E = \mathbf{x^2 + 22x + 120}$

6. $F = (8x + 5)(6x + 8)$
$F = 48x^2 + 64x + 30x + 40$
$F = \mathbf{48x^2 + 94x + 40}$

Exercice 2

1. $A = (7x + 7)(9x + 4)$
$A = 63x^2 + 28x + 63x + 28$
$A = \mathbf{63x^2 + 91x + 28}$

2. $B = (x + 4)(x + 7)$
$B = x^2 + 4x + 7x + 28$
$B = \mathbf{x^2 + 11x + 28}$

3. $C = (x + 10)(x + 4)$
$C = x^2 + 10x + 4x + 40$
$C = \mathbf{x^2 + 14x + 40}$

4. $D = (6x + 8)(2x + 6)$
$D = 12x^2 + 36x + 16x + 48$
$D = \mathbf{12x^2 + 52x + 48}$

5. $E = (x + 10)(x + 9)$
$E = x^2 + 10x + 9x + 90$
$E = \mathbf{x^2 + 19x + 90}$

6. $F = (2x + 8)(5x + 7)$
$F = 10x^2 + 14x + 40x + 56$
$F = \mathbf{10x^2 + 54x + 56}$

Exercice 3

1. $A = (3x-2)(4x+6)$
$A = 12x^2 + 18x - 8x - 12$
$A = \mathbf{12x^2 + 10x - 12}$

2. $B = (8x-7)(6x-4)$
$B = 48x^2 - 32x - 42x + 28$
$B = \mathbf{48x^2 - 74x + 28}$

3. $C = (3x-5)(9x+9)$
$C = 27x^2 + 27x - 45x - 45$
$C = \mathbf{27x^2 - 18x - 45}$

4. $D = (8x-8)(6x-4)$
$D = 48x^2 - 32x - 48x + 32$
$D = \mathbf{48x^2 - 80x + 32}$

5. $E = (7x-5)(5x-3)$
$E = 35x^2 - 21x - 25x + 15$
$E = \mathbf{35x^2 - 46x + 15}$

6. $F = (2x-8)(8x+6)$
$F = 16x^2 + 12x - 64x - 48$
$F = \mathbf{16x^2 - 52x - 48}$

Exercice 4

1. $A = (4-6z)^2$
$A = (4-6z)(4-6z)$
$A = 4 \times 4 + 4 \times (-6z) + (-6z) \times 4 + (-6z) \times (-6z)$
$A = 16 - 24z - 24z + 36z^2$
$A = 36z^2 - 48z + 16$

2. $B = (10+9z)^2$
$B = (10+9z)(10+9z)$
$B = 10 \times 10 + 10 \times 9z + 9z \times 10 + 9z \times 9z$
$B = 100 + 90z + 90z + 81z^2$
$B = 81z^2 + 180z + 100$

3. $C = (7x+10)^2$
$C = (7x+10)(7x+10)$
$C = 7x \times 7x + 7x \times 10 + 10 \times 7x + 10 \times 10$
$C = 49x^2 + 70x + 70x + 100$
$C = 49x^2 + 140x + 100$

4. $D = (3y-7)^2$
$D = (3y-7)(3y-7)$
$D = 3y \times 3y + 3y \times (-7) + (-7) \times 3y + (-7) \times (-7)$
$D = 9y^2 - 21y - 21y + 49$
$D = 9y^2 - 42y + 49$

Exercice 5

1. $A = (c-7)(c+7)$
$A = c^2 - 7^2$
$A = c^2 - 49$

2. $B = (y-6)(y+6)$
$B = y^2 - 6^2$
$B = y^2 - 36$

3. $C = (a-9)(a+9)$
$C = a^2 - 9^2$
$C = a^2 - 81$

4. $D = (c-4)(c+4)$
$D = c^2 - 4^2$
$D = c^2 - 16$

5. $E = (x-2)(x+2)$
$E = x^2 - 2^2$
$E = x^2 - 4$

6. $F = (a-8)(a+8)$
$F = a^2 - 8^2$
$F = a^2 - 64$

Exercice 6

1. $A = (3y-5)(3y+5)$
$A = (3y)^2 - 5^2$
$A = 9y^2 - 25$

2. $B = (4z-8)(4z+8)$
$B = (4z)^2 - 8^2$
$B = 16z^2 - 64$

3. $C = (8z-7)(8z+7)$
$C = (8z)^2 - 7^2$
$C = 64z^2 - 49$

4. $D = (9c-6)(9c+6)$
$D = (9c)^2 - 6^2$
$D = 81c^2 - 36$

5. $E = (8z-8)(8z+8)$

$E = (8z)^2 - 8^2$
$E = 64z^2 - 64$

6. $F = (4b - 6)(4b + 6)$
$F = (4b)^2 - 6^2$
$F = 16b^2 - 36$