

CALCUL LITTÉRAL

Exercices supplémentaires

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Nom & Prénom :



LA DRILL TEAM



<https://bit.ly/4uVCwxq>

Réduis chaque expression, si possible :

Série 1 :

$$(1) (-3x) \cdot (-x) = 3x^2$$

$$(2) -ab - ab = -2ab$$

$$(3) 2xy - 5xy = -3xy$$

$$(4) 3a^2 - 6a^2 + a^2 = -2a^2$$

$$(5) 3a - (2b + 4a) = 3a - 2b - 4a = -a - 2b$$

$$(6) a + (a - b + c) - (a + c - b) = a + a - b + c - a - c + b = a$$

$$(7) -2ab \cdot (-4a) \cdot 7b = 56a^2b^2$$

Série 2 :

$$(1) 2a(a + b) = 2a^2 + 2ab$$

$$(2) 2a(3b + 5c) = 6ab + 10ac$$

$$(3) (x + 2y)(3x + y) = 3x^2 + xy + 6xy + 2y^2 = 3x^2 + 2y^2 + 7xy$$

$$(4) (5 - a)(a - 3) = 5a - 15 - a^2 + 3a = -a^2 + 8a - 15$$

$$(5) x - (2x - 3) + 4 \cdot (x - 5) = x - 2x + 3 + 4x - 20 = 3x - 17$$

$$(6) 3ab - 3a(5 - 2b) - (-a) = 3ab - 15a + 6ab + a = -14a + 9ab$$

$$(7) (-2a)(-5ab)(-2bc) = -20a^2b^2c$$

Série 3 :

$$(1) (x+4y)(3x-2y) = 3x^2 - 2xy + 12xy - 8y^2 = 3x^2 - 8y^2 + 10xy$$

$$(2) (2a-b)(a+3b) = 2a^2 + 6ab - ab - 3b^2 = 2a^2 - 3b^2 + 5ab$$

$$(3) (3a-1)(2-a) - (a+1)(1-2a) = 6a - 3a^2 - 2 + a - (a - 2a^2 + 1 - 2a) \\ = 6a - 3a^2 - 2 + a - a + 2a^2 - 1 + 2a = -a^2 + 8a - 3$$

$$(4) 3b(b-2) - (9b^2 - (b-1)(b+2)) = 3b^2 - 6b - 9b^2 + b^2 + 2b - b - 2 =$$

$$(5) ab \cdot (-2) \cdot 4a \cdot (-5) = 40a^2b$$

$$(6) 5xy \cdot (-2xy) = -10x^2y^2$$

$$(7) -2 \cdot 3ab \cdot (-5bc) = 30ab^2c$$

Série 4 :

$$(1) a \cdot (-abc) \cdot 2b^2 \cdot 3c^2 = -6a^2b^3c^3$$

$$(2) 2x + (4x-3) - 5(2+x) = 2x + 4x - 3 - 10 - 5x = x - 13$$

$$(3) 5(x^2+3) - 2(x+5x^2) = 5x^2 + 15 - 2x - 10x^2 = -5x^2 - 2x + 15$$

$$(4) 2(2x(4-x) + 3x) - x(2-x) + x^2 - 4 = 2 \cdot (8x - 2x^2 + 3x) - 2x + x^2 + x^2 - 4 \\ = 16x - 4x^2 + 6x - 2x + 2x^2 - 4 = -2x^2 + 20x - 4$$

$$(5) \frac{3}{2} \times \left(\frac{5}{2}x + 2 \right) - \frac{1}{2}x = \frac{15}{4}x + 3 - \frac{1}{2}x = \frac{13}{4}x + 3$$

$$(6) \left(\frac{1}{3}x - \frac{3}{4} \right) \left(3x + \frac{4}{3} \right) = x^2 + \frac{4}{9}x - \frac{9}{4}x - 1 = x^2 - \frac{65}{36}x - 1$$

$$(7) 2(x+3)(4x-1) + (x+3) = 2(4x^2 - x + 12x - 3) + x + 3 \\ = 8x^2 - 2x + 24x - 6 + x + 3 \\ = 8x^2 + 23x - 3$$