

3. Factorisez les Polynômes

Mathématiques 9

Nom: _____
Block: _____ Date: _____

Factorisez les polynômes en trouvant le plus grand facteur commun parmi tous les termes.

$15y + 5 = 5(3y + 1)$ $7a + 7 = 7(a + 1)$ $12n - 3 = 3(4n - 1)$ $5 + 20x = 5(1 + 4x)$ $6x - 2 = 2(3x - 1)$	$14n + 21p + 7 = 7(2n + 3p + 1)$ $9x - 18y + 3 = 3(3x - 6y + 1)$ $11 - 22a + 44b = 11(1 - 2a + 4b)$ $5x^2 + 10x + 5 = 5(x^2 + 2x + 1)$ $28x^2 + 28x + 7 = 7(4x^2 + 4x + 1)$
$24x + 28 = 4(6x + 7)$ $10a + 25b = 5(2a + 5b)$ $40n - 24 = 8(5n - 3)$ $33p + 55 = 11(3p + 5)$ $18x - 30y = 6(3x - 5y)$ $100 + 40z = 20(5 + 2z)$ $56x^2 + 42 = 14(4x^2 + 3)$	$20x + 60y - 100z = 20(x + 3y - 5z)$ $14a - 12b + 6c = 2(7a - 6b + 3c)$ $24 + 48x + 42x^2 = 6(4 + 8x + 7x^2)$ $50a - 20b + 30c = 10(5a - 2b + 3c)$ $6c^2 + 27c - 15 = 3(2c^2 + 9c - 5)$ $12r + 36s - 60t = 12(r + 3s - 5t)$ $18x - 12y - 3 = 3(6x - 4y - 1)$
$x^2 + 3x = x(x + 3)$ $5a^2 + 2a = a(5a + 2)$ $y^2 - 7y = y(y - 7)$ $12x - x^2 = x(12 - x)$ $3x^3 + 2x^2 = x^2(3x + 2)$ $x^4 - 5x^2 = x^2(x^2 - 5)$	$a^3 + 5a^2 + 3a = a(a^2 + 5a + 3)$ $2x^3 + x^2 - 8x = x(2x^2 + x - 8)$ $ab + 2b + b^2 = b(a + 2 + b)$ $5x^2y + xy + 7y = y(5x^2 + x + 7)$ $x^3 - 4x^2 + x = x(x^2 - 4x + 1)$ $ab + b^2 + 2bc = b(a + b + 2c)$

$$5x^2 + 10x = 5x(x + 2)$$

$$8a^2 - 2a = 2a(4a - 1)$$

$$4y^5 + 3y^2 = y^2(4y^3 + 3)$$

$$x^2y^2 + x^3y = x^2y(y + x)$$

$$x^2y^2 + xy = xy(xy + 1)$$

$$3p + 12p^2 = 3p(1 + 4p)$$

$$6m^3 - 9m^2 = 3m^2(2m - 3)$$

$$4x^2 + 6xy = 2x(2x + 3y)$$

$$10t^5 - 15t^4 = 5t^4(2t - 3)$$

$$12a^2 - 18ab = 6a(2a - 3b)$$

$$7x^3 - 7x^2 = 7x^2(x - 1)$$

$$25h + 30hi = 5h(5 + 6i)$$

$$x^6 + x^5 - x^4 = x^4(x^2 + x - 1)$$

$$a^7 - a^5 - a^3 = a^3(a^4 - a^2 - 1)$$

$$5w^5 + 3w^4 + 6w^3 = w^3(5w^2 + 3w + 6)$$

$$6x^2y - xy^2 + 2x^2y^2 = xy(6x - y + 2xy)$$

$$x^3y + x^2y + x^2y^2 = x^2y(x + 1 + y)$$

$$a^3b^3 + a^2b^2 + ab = ab(a^2b^2 + ab + 1)$$

$$12a^3 - 9a^2 - 6a = 3a(4a^2 - 3a - 2)$$

$$10x^3 + 4x^2 + 6x = 2x(5x^2 + 2x + 3)$$

$$8xy + 8y^2 - 8yz = 8y(x + y - z)$$

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

$$63p^4 + 81p^3 - 72p^2 = 9p^2(7p^2 + 9p - 8)$$

$$60a^2 + 30ab - 90ac = 30a(2a + b - 3c)$$