

Mise en évidence

Factoriser en utilisant la mise en évidence de facteurs communs :

$$A = ax + x$$

$$B = mn + np$$

$$C = a^2x^3 - a^3x^2$$

$$D = 4ac - 2ab$$

$$E = 6x^2y - 4xy$$

$$F = 24x^3y^5 - 36xy^2$$

$$G = 15a^7b^2 - 10a^5b^3$$

$$H = 3xy(yz)^2 - xy(yz)^2$$

$$I = q^{n+1} + q^n$$

$$J = 4a^n - 12a^{2n}$$

$$K = a^{3n}b^{m+1} + a^{2n}b^{m+3}$$

$$L = (x - 2)y + z(x - 2)$$

$$M = m(x - y) + n(y - x)$$

$$N = (m - n)a - (m - n)^3b$$

$$O = a^2(x - y) - a(y - x)^2$$

$$P = ab(x - y)^2 + a(y - x)^3$$

$$Q = -7a^3x - 7a^2x^2 + 7ax^3$$

$$R = -a(b - c + d) - (-d + c - b)$$

Imprimez cette page, essayez tous les exercices, puis cliquez s.v.p.  [ici](#)

Réponses :

$$\begin{array}{ll}
 A & = ax + x & = x(a + 1) \\
 B & = mn + np & = n(m + p) \\
 C & = a^2x^3 - a^3x^2 & = a^2x^2(x - a) \\
 D & = 4ac - 2ab & = 2a(2c - b) \\
 E & = 6x^2y - 4xy & = 2xy(3x - 2) \\
 F & = 24x^3y^5 - 36xy^2 & = 12xy^2(2x^2y^3 - 3) \\
 G & = 15a^7b^2 - 10a^5b^3 & = 5a^5b^2(3a^2 - 2b) \\
 H & = 3xy(yz)^2 - xy(yz)^2 & = 2xy^3z^2 \\
 I & = q^{n+1} + q^n & = q^n(q + 1) \\
 J & = 4a^n - 12a^{2n} & = 4a^n(1 - 3a^n) \\
 K & = a^{3n}b^{m+1} + a^{2n}b^{m+3} & = a^{2n}b^{m+1}(a^n + b^2) \\
 L & = (x - 2)y + z(x - 2) & = (x - 2)(y + z) \\
 M & = m(x - y) + n(y - x) & = (x - y)(m - n) \\
 N & = (m - n)a - (m - n)^3b & = (m - n)(a - bm^2 + 2bmn - bn^2) \\
 O & = a^2(x - y) - a(y - x)^2 & = a(x - y)(a - x + y) \\
 P & = ab(x - y)^2 + a(y - x)^3 & = a(x - y)^2(b - x + y) \\
 Q & = -7a^3x - 7a^2x^2 + 7ax^3 & = -7ax(a^2 + ax - x^2) \\
 R & = -a(b - c + d) - (-d + c - b) & = (b - c + d)(1 - a)
 \end{array}$$

Remarques :

$$a^{2n} = a^{n+n} = a^n a^n$$

$$b^{m+3} = b^{m+1+2} = b^{m+1}b^2$$

$$(x - y)^2 = (x - y)(x - y) = [-(y - x)][-(y - x)] = (y - x)^2$$

$$(x - y)^3 = (x - y)(x - y)(x - y) = [-(y - x)][-(y - x)][-(y - x)] = -(y - x)^3$$