



evropský
sociální
fond v ČR



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Mnohočleny – rozklad na součin vytýkáním – řešení

Rozložte na součin:

$$5s^5 - 20s^4 + 30s^3 = 5s^3(s^2 - 4s + 6)$$

$$42p^3r^2s - 70p^2rs^2 = 14p^2rs(3pr - 5s)$$

$$-4x^2 + 6xy - 2x = -2x(2x - 3y + 1)$$

$$40u^2 - 16u^3xz - 24u^2x^2z^3 = 8u^2(5 - 2uxz - 3x^2z^3)$$

$$-48a^3b^5c^4 - 16a^4b^3c^5 - 24a^3b^4c^3 = -8a^3b^3c^3(6b^2c + 2ac^2 + 3b)$$

$$-9x^2 - 12x^3y^2 - 3xy = -3xy(3x + 4x^2y + 1)$$

$$-3m^4n^2 - 6m^3n^3 - 9m^2n^3 = -3m^2n^2(m^2 + 2mn + 3n)$$

$$-10p^2q^2 - 40p^3q^4 - 100p^2q^4 = -10p^2q^2(1 + 4pq^2 + 10q^2)$$

$$-50r^3s + 75r^2s^2 - 125rs^2 = -25rs(2r^2 - 3rs + 5s)$$

$$2a(k-1) - 3(1-k) = 2a(k-1) - 3(-1)(k-1) = (k-1)(2a+3)$$

$$-6u(u-1) + 2(u-1) = (u-1)(-6u+2)$$

$$4x(y-3) - 7y(3-y) = 4x(y-3) - 7y(-1)(y-3) = (y-3)(4x+7y)$$

$$(m-3) \cdot 5x + 9(3-m) = (m-3) \cdot 5x - 9(m-3) = (m-3)(5x-9)$$

$$8n(x+4) - 7(-x-4) = 8n(x+4) - 7(-1)(x+4) = (x+4)(8n+7)$$

$$4a(m-2) - 2b(-m+2) = 4a(m-2) - 2b(-1)(m-2) = (m-2)(4a+2b)$$

$$5x(2x-y) - 3y(y-2x) = 5x(2x-y) - 3y(-1)(-y+2x) = (2x-y)(5x+3y)$$

$$4a^2 - 4b + a^2x - bx = 4(a^2 - b) + x(a^2 - b) = (a^2 - b)(4+x)$$

$$a^2c^2 - a^2 - b^2c^2 + b^2 = a^2(c^2 - 1) - b^2(c^2 - 1) = (c^2 - 1)(a^2 - b^2)$$

$$6mx + 9nx + 4my + 6ny = 3x(m+3n) + 2y(m+3n) = (m+3n)(3x+2y)$$

$$k^3 + k^2 + k + 1 = k^2(k+1) + (k+1) = (k+1)(k^2+1)$$

$$ab - a - b + 1 = a(b-1) - (b-1) = (b-1)(a-1)$$

$$s + s^2 - s^3 - 1 = -s^3 + s^2 + s - 1 = -s^2(s-1) + (s-1) = (s-1)(-s^2+1) = -1(s-1)^2(s+1)$$

$$2x + 2xz + 2yz + 2y = 2x(1+z) + 2y(z+1) = (1+z) \cdot (2x+2y) = (z+1) \cdot (x+y) \cdot 2$$

$$4z^2 + 8z + 4z^3 = 4z(z+2+z^2)$$

$$15abx - 9b^2y + 12bz = 3b(5ax - 3by + 4z)$$

$$3ac - ad + 6bc - 2bd = a(3c-d) + 2b(3c-d) = (3c-d) \cdot (a+2b)$$

$$36mp - 18m - 6 + 12p = 18m(2p-1) - 6(1-2p) = (2p-1) \cdot (18m+6)$$

$$6a^3 - a^2 - 18a + 3 = a^2(6a-1) - 3(6a-1) = (6a-1) \cdot (a^2-3)$$

$$xa + ay + x + y = a(x+y) + (x+y) = (x+y)(a+1)$$

$$25x^2 - 15x + 5ax - 3a = 5x(5x-3) + a(5x-3) = (5x-3) \cdot (5x+a)$$