

Faktorizacija – ponavljanje gradiva – RM 7



1. Napiši u obliku umnoška:

- a. $9x^2 - 25y^2 =$ Rj: $(3x - 5y)(3x + 5y)$
b. $16a^2 - 72ab + 81b^2 =$ Rj: $(4a - 9b)^2$
c. $8a^3 + 27 =$ Rj: $(2a + 3)(4a^2 - 6a + 9)$
d. $x^2 + 4y^2 + 9z^2 - 4xy + 6xz - 12yz =$ Rj: $(x - 2y + 3z)^2$
e. $x^4 - 81 =$ Rj: $(x + 3)(x - 3)(x^2 + 9)$
f. $9 - (y + 3)^2 =$ Rj: $-y(y + 6)$
g. $(x - 2y)^2 - (2x - y)^2 =$ Rj: $-3(x + y)(x - y)$
h. $4a^2b^2 - (a^2 + b^2)^2 =$ Rj: $-(a - b)^2(a + b)^2$

2. Napiši u obliku umnoška:

- a. $5x^3y^2 - 20xy^4 =$ Rj: $5xy^2(x - 2y)(x + 2y)$
b. $48a^4 - 6ab^3 =$ Rj: $6a(2a - b)(4a^2 + 2ab + b^2)$
c. $24a^3x - 36a^2bx + 18ab^2x - 3xb^3 =$ Rj: $3x(2a - b)^3$
d. $2x^4y - x^2y^2 - x^6 =$ Rj: $-x^2(x^2 - y)^2$

3. Napiši u obliku umnoška:

- a. $(a + 3b)(x - y) - (b - 3a)(x - y) =$ Rj: $2(x - y)(2a - b)$
b. $(4a - 5b)(3m - 2n) - (2b - a)(6m - 4n) =$ Rj: $3(3m - 2n)(2a - 3b)$
c. $(x + y)(x - y)^2 - (x - y)(x + y)^2 =$ Rj: $-2y(x + y)(x - y)$
d. $a(1 - b) - 2b(b - 1) =$ Rj: $(1 - b)(a + 2b)$
e. $a^2 - 4b^2 + 9b^2(4b^2 - a^2) =$ Rj: $(a - 2b)(a + 2b)(1 - 3b)(1 + 3b)$

4. Napiši u obliku umnoška:

- a. $a^5 - a^3 + a^2 - 1 =$ Rj: $(a - 1)(a + 1)^2(a^2 - a + 1)$
b. $x^3 + 5x^2 - x - 5 =$ Rj: $(x + 5)(x - 1)(x + 1)$
c. $ax^3 + ax^2 + ax - bx^4 - bx^3 - bx^2 =$ Rj: $x(x^2 + x + 1)(a - bx)$
d. $9a^2 - 6ab + b^2 - 1 =$ Rj: $(3a - b - 1)(3a - b + 1)$
e. $b^2 - 4ab + 4a^2 + b - 2a =$ Rj: $(2a - b)(2a - b - 1)$
f. $a^2 - b^2 + c^2 - d^2 - 2ac - 2bd =$ Rj: $(a + b - c + d)(a - b - c - d)$
g. $x^2 + 5x + 6 =$ Rj: $(x + 2)(x + 3)$