

## 1. POGEDNOSTAVI

$$\begin{aligned} a) 2a(3a-5b) + 2b(2a-3b) - 6a(a-b) \\ = 6a^2 - 10ab + 4ab - 6b^2 - 6a^2 + 6ab \quad (+1) \\ = -6b^2 \quad (+1) \end{aligned}$$

## 2. IZRAČUNAJ

$$\begin{aligned} a) (x-2y)(x+2y) - (2x-y)(2x+y) \\ = x^2 - 2xy - 2xy - 4y^2 - (4x^2 + 2xy - 2xy - y^2) \\ = x^2 + 2xy - 2xy - 4y^2 - (4x^2 + 2xy - 2xy - y^2) \\ = x^2 - 4y^2 - 4x^2 + y^2 \\ = -3x^2 - 3y^2 \\ = -3(x^2 + y^2) \quad (+1) \end{aligned}$$

## 3. PROVEI KVAADRIRANJA

$$\begin{aligned} a) (3a+2b)^2 &= (3a)^2 + 2 \cdot 3a \cdot 2b + (2b)^2 \\ &= 9a^2 + 12ab + 2b^2 \quad (+1) \end{aligned}$$

## 4. -11-

$$\begin{aligned} a) \left(\frac{1}{2}a + \frac{1}{6}\right)^2 &= \left(\frac{1}{2}a\right)^2 + 2 \cdot \frac{1}{2}a \cdot \frac{1}{6} + \left(\frac{1}{6}\right)^2 \\ &= \frac{1}{4}a^2 + \frac{1}{6}a + \frac{1}{36} \quad (+1) \end{aligned}$$

## 5. ZAPIŠI U OBLIKU KVAADRATA BINOMA

$$\begin{aligned} 1) 4x^2 + 4x + 1 &= (2x+1)^2 \quad (+1) \\ 2) a^2b^2 - 8a^2b + 16 &= (a^2b - 4)^2 \quad (+1) \end{aligned}$$

## 6. Zapiši u obliku kvadrata binoma:

$$\begin{aligned} a) (a-2b)^2 + 8ab &= a^2 - 2 \cdot a \cdot 2b + (2b)^2 + 8ab \\ &= a^2 - 4ab + 4b^2 + 8ab \quad (+1) \\ &= a^2 + 4ab + 4b^2 \\ &= (a+2b)^2 \quad (+1) \end{aligned}$$

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7. KUBIRAJ

$$(a^2b^2 - 5)^3 = (a^2b^2)^3 - 3 \cdot (a^2b^2)^2 \cdot 5 + 3 \cdot a^2b^2 \cdot 5^2 - 5^3$$
$$= a^6b^6 - 15a^4b^4 + 75a^2b^2 - 125 \quad (+1)$$

8. POMNOŽI

$$(2a-3)(2a+3) = 4a^2 - 9 \quad (+1)$$

9. ZAPIŠI U OBLIKU KVADRATA BINOMA

$$(a-2b)^2 + 8ab = a^2 - 2 \cdot a \cdot 2b + (2b)^2 + 8ab$$
$$= a^2 - 8ab + 4b^2 + 8ab \quad (+1)$$
$$= a^2 + 4b^2$$
$$= (a+2b)^2 \quad (+1)$$

10. RASTAVI NA FAKTORE

$$(2a-1)(3a+2) + (2a-1)(2a+3)$$
$$= (2a-1)(5a+1) \quad (+1)$$

11. RASTAVI NA FAKTORE

$$2ab + 4a + b^2 + 2b$$
$$= 2a(b+2) + b(b+2)$$
$$= (b+2)(2a+b) \quad (+1)$$

12. SKRATI RAZLOMKE

$$\frac{a^2-4}{2a-4} = \frac{(a-2)(a+2)}{a(a-2)} = a+2 \quad (+1)$$

13. IZRAČUNAJ

$$\frac{a}{2a-4} + \frac{2a-1}{3a-6} = \frac{a}{2(a-2)} - \frac{2a-1}{3(a-2)} \quad (+1)$$

$$= \frac{3a-2(2a-1)}{6(a-2)} = \frac{3a-4a+2}{6(a-2)} = \frac{-a+2}{6(a-2)} = -\frac{(a-2)}{6(a-2)} = -\frac{1}{6} \quad (+1)$$

14. IZRAČUNAJ

$$\frac{3}{2x^2+2x} + \frac{2x-1}{x^2-1}$$

$$= \frac{3}{2x(x+1)} + \frac{2(x-1)}{(x-1)(x+1)} \quad (+1)$$
$$= \frac{3x-3+4x^2-2x}{2x(x+1)(x-1)} = \frac{(4x^2+x)-3}{2x(x+1)(x-1)} \quad (+1)$$