

45. Koristimo formulame:

kvadrat zbroja

i

kvadrat razlike

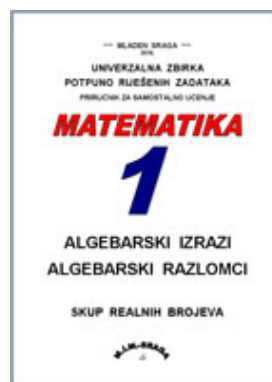
$$(A+B)^2 = A^2 + 2AB + B^2$$

$$(A-B)^2 = A^2 - 2AB + B^2$$

$$\begin{aligned}
 11) \quad 2(x+1)^2 - \frac{1}{3}(x+3)^2 &= 2 \cdot (x^2 + 2 \cdot x \cdot 1 + 1^2) - \frac{1}{3} \cdot (x^2 + 2 \cdot x \cdot 3 + 3^2) = \\
 &= 2 \cdot x^2 + 2 \cdot 2x + 2 \cdot 1 - \frac{1}{3} \cdot x^2 - \frac{1}{3} \cdot 6x - \frac{1}{3} \cdot 9 = \\
 &= 2x^2 + 4x + 2 - \frac{1}{3}x^2 - 2x - 3 = \\
 &= 2x^2 - \frac{1}{3}x^2 + 4x - 2x + 2 - 3 = \qquad 2x^2 - \frac{1}{3}x^2 = \\
 &= \frac{6}{3}x^2 - \frac{1}{3}x^2 + 2x - 1 = \qquad \downarrow \text{ vidi uputu !!!} \\
 &= \frac{5}{3}x^2 + 2x - 1 \qquad \downarrow \\
 &\qquad 2x^2 - \frac{1}{3}x^2 = \frac{6}{3}x^2 - \frac{1}{3}x^2 = \left(\frac{6}{3} - \frac{1}{3}\right)x^2 = \frac{5}{3}x^2
 \end{aligned}$$

$$\begin{aligned}
 12) \quad \frac{1}{2}(a-1)^2 - 2(a+2)^2 &= \frac{1}{2} \cdot (a^2 - 2 \cdot a \cdot 1 + 1^2) - 2 \cdot (a^2 + 2 \cdot a \cdot 2 + 2^2) = \\
 &= \frac{1}{2} \cdot a^2 - \frac{1}{2} \cdot 2 \cdot a - \frac{1}{2} \cdot 1 - 2 \cdot a^2 - 2 \cdot 4 \cdot a - 2 \cdot 4 = \\
 &= \frac{1}{2}a^2 - a - \frac{1}{2} - 2a^2 - 8a - 8 = \\
 &= \frac{1}{2}a^2 - 2a^2 - a - 8a - \frac{1}{2} - 8 = \qquad [-a - 8a = (-1-8) \cdot a = -9a] \\
 &= \left(\frac{1}{2} - 2\right) \cdot a^2 - 9a - \frac{1}{2} - \frac{16}{2} = \\
 &= \frac{1-2 \cdot 2}{2} \cdot a^2 - 9a - \frac{17}{2} = \\
 &= -\frac{3}{2}a^2 - 9a - \frac{17}{2}
 \end{aligned}$$

Preostala rješenja 45. zadataka nalaze se samo u štampanoj varijanti naše zbirke: [Matematika-1- UREĐAJ U SKUPU REALNIH BROJEVA](#) ALGEBARSKI IZRAZI , ALGEBARSKI RAZLOMCI , POTENCIJE



UNIVERZALNA ZBIRKA POTPUNO RIJEŠENIH ZADATAKA : MATEMATIKA -1-
[SKUP REALNIH BROJEVA](#): POTENCIJE, ALGEBARSKI IZRAZI, ALGEBARSKI RAZLOMCI

Autori: Ivana i Mladen Sraga