17. Korenovanje – vežbe (rad u grupama)

Zadaci za ocene 4-5

ZADATAK 1. Uprosti izraze:

a) $\dfrac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \dfrac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}}$,

b) $\dfrac{\sqrt{2a+2\sqrt{a^2-9}}}{\sqrt{2a-2\sqrt{a^2-9}}}$.

ZADATAK 2. $A = \sqrt[3]{\left(1-\dfrac{2}{x}+\dfrac{1}{x^2}\right)\cdot\left(1-\dfrac{1}{x^2}\right)}$ i $B = 3\cdot\sqrt[3]{\left(\dfrac{1}{x}+\dfrac{1}{x^2}\right)\cdot\left(\dfrac{x}{27}-\dfrac{1}{9}-\dfrac{1}{9x}-\dfrac{1}{27x^2}\right)}$,

dokaži da je $A = B$.

ZADATAK 3. Izračunaj $\left(\dfrac{3x^{-\frac{1}{3}}}{x^{\frac{2}{3}}-2x^{-\frac{1}{3}}} - \dfrac{x^{\frac{1}{3}}}{x^{\frac{4}{3}}-x^{\frac{1}{3}}}\right)^{-1} - \left(\dfrac{1-2x}{3x-2}\right)^{-1}$. $\qquad \left[R:\dfrac{x^2}{2x-1}\right]$

ZADATAK 4. Racionališi:

a) $\dfrac{2}{\sqrt[3]{5}-\sqrt[3]{3}}$

b) $\dfrac{1}{\sqrt[4]{x}+\sqrt[4]{y}}$

c) $\dfrac{1}{\sqrt{5}-\sqrt{2}-\sqrt{3}}$

ZADATAK 5. Ako je $A = \sqrt{6+\sqrt{11}}$ i $B = \sqrt{7-\sqrt{33}}+\sqrt{2+\sqrt{3}}$, onda je $A = B$. Dokaži.