

Druga zadača II razred

1. Izračunaj:

a)  $\sqrt{36} - 2\sqrt{25} + \sqrt[4]{16} - \sqrt[5]{32}$

b)  $\sqrt{\frac{4}{9}} + \sqrt[3]{\frac{1}{8}} + \sqrt[4]{16}$

c)  $\sqrt{\left(\frac{4}{9}\right)^2} + \sqrt[3]{-27} - \sqrt{4}$

d)  $\sqrt{9} \cdot \sqrt[3]{-8} \cdot \sqrt[5]{-32}$

2. Izraze ispred korijena unijeti pod korijen i uprostiti ih.

a)  $x\sqrt{\frac{1}{x}}$

b)  $2a\sqrt{\frac{x}{4a}}$

c)  $b^3\sqrt{b^4}$

d)  $xy^2\sqrt{\frac{x}{y^3}}$

e)  $(x-1)\sqrt{\frac{1}{x^2-1}}$

3. Izvrši naznačene računske radnje:

a)  $2\sqrt{ab^3} \cdot 5\sqrt{a^3b}$     b)  $12\sqrt{x^3y} : 3\sqrt{xy}$     c)  $\left(\sqrt[3]{x^2y^3}\right)^5 \cdot \left(\sqrt[3]{\frac{x^2}{y}}\right)^4$

...

4. Racionalisati nazivnike:

a)  $\frac{6}{3\sqrt{2}-2\sqrt{3}}$     b)  $\frac{5}{4-\sqrt{11}}$     c)  $\frac{3-2\sqrt{2}}{\sqrt{2}-1}$     d)  $\frac{2+\sqrt{2x}}{x+\sqrt{2x}}$

5. Uprosti izraz:

$$\left( \frac{3\sqrt{m}}{\sqrt{m}-1} - \frac{2\sqrt{m}}{\sqrt{m}+1} - \frac{m}{m-1} \right) \cdot \frac{m-1}{\sqrt{m}}$$

6. Uprosti izraze:

a)  $\frac{(a^2 \cdot b^3)^2}{ab^4} \cdot \frac{a^3b}{(a^2b^4)^3}$     b)  $\frac{(3x^2y^3)^3 : 3x^2y^3}{(9xy^2)^2 \cdot x^2 \cdot y^2}$

7. Izračunaj:

a.  $6 \cdot (y^7)^4 - 12 \cdot (y^{14})^2 =$

b.  $2a^2 - 5a - 6a^2 - 4a =$

c.  $\left(\frac{3}{4}\right)^4 \cdot \left(\frac{4}{3}\right)^4 =$

d.  $(x^4y^5)^2 \cdot (x^2y^3)^2 =$

e.  $2a^2b^3 \cdot \frac{1}{4}ab^5 \cdot 8b^3 =$

f.  $\left(\frac{3}{2}x^2y\right)^3 \cdot \left(\frac{2}{3}x^3y^2\right)^2 =$

g.  $\left(\frac{4}{5}\right)^y : \left(\frac{2}{25}\right)^y =$

h.  $c^{18+3x} : c^{4x-3} =$

i.  $a^{28} \cdot a^{11} \cdot a^6 =$

j.  $(3a^2)^2 - (2a)^4 + 3a^4 =$

k.  $\left(\frac{10}{x}\right)^{7a-b} : \left(\frac{10}{x}\right)^{8a+b} =$

l.  $\left(\frac{a^4}{3b^2}\right)^4 \cdot (9a^2b^2)^3 =$