PRIPREMA ZA 1.ISPIT ZNANJA „POTENCIRANJE I KORIJENOVANJE“

1. Izračunaj koristeći tablicu kvadrata:

a) $9^2 =$ e) $(-2.5)^2 =$ i) $0.03^2 =$ m) $-\left(12\frac{5}{8}\right)^2 =$

b) $0.7^2 =$ f) $-\left(\frac{7}{9}\right)^2 =$ j) $16900^2 =$ n) $0.128^2 =$

c) $\frac{1^2}{3} =$ g) $125^2 =$ k) $-\left(-\frac{15}{11}\right)^2 =$ o) $-2.9^2 =$

d) $-5^2 =$ h) $-\frac{2}{3^2} =$ l) $(-47)^2 =$ p) $-\left(\frac{-12}{19}\right)^2 =$

2. Koliko je:

a) $2.4^2 =$ c) $240^2 =$ e) $0.24^2 =$

b) $0.024^2 =$ d) $24^2 =$

3. Izračunaj koristeći tablicu kvadrata:

a) $\sqrt{81} =$ c) $\sqrt{15129} =$ e) $\frac{-2}{\sqrt{1936}} =$ g) $\sqrt{0.1225} =$

b) $\sqrt{\frac{289}{121}} =$ d) $\frac{\sqrt{1024}}{9} =$ f) $\frac{\sqrt{1}}{\sqrt{784}} =$ h) $\sqrt{400^2} =$

4. Izračunaj:

a) $2^2 - (-2)^2 =$ e) $\sqrt{25-16} =$ i) $10^2 - \left(\sqrt{12}\right)^2 =$

b) $-3^2 + 4^2 =$ f) $\sqrt{25} - 16 =$ j) $-48 + 72 : (-6)^2 =$

c) $(5-9)^2 =$ g) $\sqrt{\frac{1}{2} - \frac{3}{4} \cdot \frac{186}{9}} =$ k) $\sqrt{3 + \left(1\frac{1}{5} - 0.4\right)^2} =$

d) $\frac{1}{2^2} - \left(\frac{3}{4}\right)^2 + \frac{-5^2}{8} =$ h) $\frac{1}{\sqrt{125} : \sqrt{5}} =$ l) $\left(\frac{3\sqrt{3}}{\sqrt{2}}\right)^2 =$

5. Izračunaj primjenom pravila za potenciranje:

a) $23^2 \cdot \left(\frac{1}{46}\right)^2 =$ c) $\left(\frac{18}{15}\right)^2 \cdot \left(\frac{45}{36}\right)^2 \cdot \left(\frac{6}{5}\right)^2 =$ e) $280^2 : 28^2 =$

b) $2000^2 \cdot 0.005^2 =$ d) $76^2 : 3.8^2 =$ f) $\left(\frac{-1}{5}\right)^2 : 0.1^2 =$

6. Izračunaj primjenom pravila kako bi brzo riješili zadatak:

a) $\sqrt{2} \cdot \sqrt{8} =$ b) $\frac{\sqrt{63}}{\sqrt{28}} =$ c)** $\sqrt{\frac{324a^2b^4}{c^6}} =$

7. Iskvadriraj:

a) $(-9abc)^2 =$ b) $\left(\frac{9xy}{14}\right)^2 =$ c) $-(0.5ab^2)^2 =$

8. Izračunaj:

a) $\sqrt{7}-5\sqrt{7}+2\sqrt{7}=$
b) $5\sqrt{3}-5\sqrt{5}+2\sqrt{3}-4\sqrt{5}=$
c) $19-9\sqrt{19}+2\sqrt{19}+19=$
d) $5\cdot 10\sqrt{15}=$
e) $\sqrt{3}\cdot 7\sqrt{5}=$
f) $4\sqrt{2}\cdot 9\sqrt{2}=$
g) $\sqrt{2}\left(5\sqrt{18}-4\sqrt{32}\right)=$
h) $\left(4\sqrt{27}-5\sqrt{75}\right):\sqrt{3}=$

9. Djelomično korijenuj i pojednostavi (reduciraj) koliko se može:

a) $\sqrt{48}=$
b) $\sqrt{27}-5\sqrt{75}+\sqrt{48}=$
c) $\sqrt{175}+\frac{14}{\sqrt{7}}=$
d) $2\sqrt{108}=$
e) $\sqrt{60}-\frac{1}{2}\sqrt{8}+\frac{4}{5}\sqrt{50}+3\sqrt{15}-\frac{1}{3}\sqrt{18}=$
f) $\sqrt{500}=$
g) $\sqrt{3}\cdot\frac{12}{\sqrt{27}}-2\left(\sqrt{2}-8\right)=$

10. **Reduciraj (pojednostavi):

a) $2x^2y^3z^4\cdot(-3x^3y^2z^4)=$
b) $\left(\frac{1}{2}x^2y^3\right)^3\cdot(4x^3y^2)^3=$
c) $\left(\frac{a^2b}{c^3}\right)^2:\left(\frac{a^2b}{c^3}\right)^6=$
d) $\left(\frac{1}{2}x^3y^2\right)^2:(4x^3y^2)^2=$

11. Napiši rezultat u obliku potencije:

a) $3^3\cdot 3^5=$
b) $8\cdot 2^4=$
c) $\frac{1}{5^3}\cdot 125=$
d) $10000:10^3=$
e) $0.01\cdot 10^7:100^2=$
f) $(-2)^2\cdot(-2)^2\cdot(-2)^2=$
g) $(-3)^2\cdot(-3)^2\cdot(-3)^2\cdot(-3)^2=$
h) $(-5)^3\cdot(-5)^3\cdot(-5)^3\cdot(-5)^3=$
i) $(0.17)^{12}:(0.17)^9=$

12. Potenciraj potencije:

a) $(5^2)^4=$
b) $(-6^2)^3=$
c) $-(-7)^2=$

13. Napiši u obliku potencije s bazom 2:

$4\cdot 16^2:64=$

14. **Napiši u obliku potencije s bazom 3:

$$\frac{3^3\cdot 81\cdot 27^2}{36\cdot(3^2)^3}=$$

15. Napiši u obliku potencije s bazom 5:

a) $5^{2x+1}\cdot 25^{1-x}:5^{x-1}=$
b)** $\frac{25^{x+1}\cdot 5^{x+5}}{125^{3-x}}=$

16. Izračunaj:

a) $\left(-\frac{3}{5}\cdot 2.5+1\right)^2:\left(-\frac{3}{2}\right)^2=$
b) $2^2\cdot\left(-\frac{1}{4}\right)+0.25+\left(-\frac{1}{5}\right)^2:0.1+\frac{3}{4}=$
c) $\sqrt{\frac{4}{7}}\cdot\sqrt{\frac{7}{24}}:\sqrt{\frac{1}{6}}=$
d) $\sqrt{16+9}+\sqrt{100-36}-\sqrt{169}=$
e) $\frac{10^3}{4}+\frac{-4}{10^2}-\frac{10^4}{10^2}-3\cdot\frac{10^2}{2}=$

17. Izračunaj površinu kvadrata opsega 25.2cm.

18. Pod pravokutnika je dimenzija 4m x 3m. Treba ga obložiti pločicama kvadratnog oblika dimenzija 20cm. Koliko komada takvih pločica nam treba za čitav pod?

19. Izračunaj i rezultat napiši u znanstvenom zapisu:

    a) 351000=
    b) 0.005678=
    c) $(7.25 \cdot 10^3) \cdot (3.5 \cdot 10^2) =$
    d) $^{**}\frac{(2.5 \cdot 10^3)^2}{25 \cdot 10^7} =$

20. Zapiši u decimalnom zapisu:

    a) $1.765 \cdot 10^5 =$ b) $2.19 \cdot 10^{-3} =$

ZADACI SA ** NISU OBVEZNI!!

Pripremila:

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