

**PARA PRATICAR**  
**POTENCIAÇÃO**

- a)  $87^1 =$                       b)  $91^0 =$                       c)  $-13^0 =$                       d)  $\left(\frac{24}{12}\right)^1 =$
- e)  $\left(\frac{3}{5}\right)^3 =$                       f)  $\left(\frac{3}{5}\right)^{-3} =$                       g)  $3^3 =$                       h)  $(-3)^3 =$
- i)  $-3^3 =$                       j)  $3^4 =$                       k)  $(-3)^4 =$                       l)  $-3^4 =$
- m)  $(-3)^{-4} =$                       n)  $(0,3)^4 =$                       o)  $(0,3)^{-3} =$                       p)  $2^{-3} =$
- q)  $-3^{-3} =$                       r)  $-10^{-1} =$                       s)  $10^{-2} =$                       t)  $10^6 =$
- u)  $(2^4)^2 =$                       v)  $-(2^4)^2 =$                       x)  $\left(\frac{2^5}{8}\right)^2 =$

1) (UnB) O valor de  $(5^{-5})^5$  é:

- a)  $5^{-25}$                       b)  $-\frac{1}{125}$                       c)  $(-25)^5$                       d)  $\frac{1}{125}$                       e)  $5^{-2}$

2) (UFMS) Efetuando a divisão  $e^x \div e^{x-2}$ , teremos:

- a)  $e^{-2}$                       b)  $e^{x^2-2x}$                       c)  $e^2$                       d)  $e^{\frac{x}{x-2}}$                       e)  $e^x$

3) (VUNESP) Se  $x = 10^{-3}$ , então  $\frac{(0,1) \cdot (0,001) \cdot 10^{-1}}{10 \cdot (0,0001)}$  é igual a

- a)  $100x$                       b)  $10x$                       c)  $x$                       d)  $\frac{x}{10}$                       e)  $\frac{x}{100}$

4) Sendo  $x = (2^2)^3$ ,  $y = 2^{2^3}$  e  $z = 2^{3^2}$ , escrevendo o produto  $x \cdot y \cdot z$  na forma  $2^n$ , qual o valor de n?

**RADICIAÇÃO**

1) Fatore:

- a)  $\sqrt{272}$                       b)  $\sqrt{567}$                       c)  $\sqrt{200}$                       d)  $\sqrt{242}$                       e)  $^4\sqrt{32}$                       f)  $^6\sqrt{729}$                       g)  $^3\sqrt{2744}$

2) Racionalize:

- a)  $\frac{5}{\sqrt{3}}$                       b)  $\frac{\sqrt{8}}{3\sqrt{2}}$                       c)  $\frac{3+\sqrt{3}}{1+\sqrt{3}}$                       d)  $\frac{4+3}{\sqrt[3]{9}}$

3) Escreva em forma de radical e resolva:

- a)  $27^{\frac{1}{3}}$                       b)  $64^{\frac{9}{27}}$                       c)  $\left(\frac{16}{81}\right)^{\frac{1}{4}}$                       d)  $4^{\frac{\sqrt{8}}{4\sqrt{2}}}$

4) Transformar  $\frac{\sqrt[3]{20}}{\sqrt{2}}$  em um único radical

5) Escrever os radicais  $\sqrt{\sqrt{\sqrt{5}}}$  e  $\sqrt{2 \cdot \sqrt[3]{2}}$  na forma de potência de expoente racional

6) (FGV) O valor de  $\frac{2}{3} \cdot 8^{\frac{2}{3}} - \frac{2}{3} \cdot 8^{-\frac{2}{3}}$  é:

- a) 1                      b) -1                      c) 2,5                      d) 0                      e) 23

7) (UEMT) o número  $\sqrt{2352}$  corresponde a:

- a)  $4\sqrt{7}$                       b)  $4\sqrt{21}$                       c)  $28\sqrt{3}$                       d)  $28\sqrt{21}$                       e)  $56\sqrt{3}$

8) (UNIFOR) A expressão  $\sqrt{18} + \sqrt{50}$  é equivalente a:

- a)  $2\sqrt{17}$                       b)  $34\sqrt{2}$                       c)  $8\sqrt{2}$                       d)  $5\sqrt{3}$                       e)  $2\sqrt{2}$

9) (FUVEST)  $\frac{2}{\sqrt{5}-\sqrt{3}} - \frac{2}{\sqrt[3]{2}}$  é igual a:

- a)  $\sqrt{5} + \sqrt{3} + \sqrt[3]{4}$                       b)  $\sqrt{5} + \sqrt{3} - \sqrt[3]{2}$                       c)  $\sqrt{5} - \sqrt{3} - \sqrt[3]{2}$                       d)  $\sqrt{5} + \sqrt{3} - \sqrt[3]{4}$                       e)  $\sqrt{5} - \sqrt{3} - \sqrt[3]{4}$