CTA 171 2021 2 Semana 2

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Tarefa basica

01. Efetuar

a) $(-3)^4 = -3.-3.-3.-3 = 81$

b) $0,5^3 = 0,5.0,5.0,5 = 0,125$

c) $15^1 = 15$

d) $1^{13} = 1.1.1... = 1$

e) $0^{20} = 0$

f) $172^1 = 172$

g) $1^{422} = 1.1.1... = 1$

h) $94^0 = 1$

02. UNICAMP

a)

$a = 3^3 = 3.3.3 = 27$

$b = (-2)^3 = -2.-2.-2 = -8$

$c = 3^{-2} = \left(\frac{1}{3}\right)^2 = \frac{1}{3}.\frac{1}{3} = \frac{1}{9}$

$d = (-2)^{-3} = \left(\frac{1}{2}\right)^3 = \frac{-1}{2}.\frac{-1}{2}.\frac{-1}{2} = \frac{1}{8}$

b) $-8, \frac{-1}{8}, \frac{1}{9}, 27$

03. FUVEST Qual desses números é igual a 0,064?

$\left(\frac{2}{5}\right)^3 = \frac{2^3}{5^3} = \frac{8}{125}$

$800 \div 125 = 0,064$

(C) $\left(\frac{2}{5}\right)^3 = 0,064$

04. O valor da expressão $5^{-1} - \frac{1}{2}$ é:

$5^{-1} - \frac{1}{2} = \left(\frac{1}{5}\right)^1 - \frac{1}{2} = \frac{2}{10} - \frac{5}{10} = \frac{-3}{10} = -0,3$

$30 \div 10 = 0,3$

(B) -0,3

05. Completar o expoente da potência de base 10.

a) $241 = 0,241 \cdot 10^3$

$0,241 \cdot 10^3 = 0,241 \cdot 1000 = 241$

b) $241 = 2,41 \cdot 10^2$

$0,241 \cdot 10^2 = 0,241 \cdot 100 = 241$

c) $241 = 24,1 \cdot 10^1$

$0,241 \cdot 10^1 = 0,241 \cdot 10 = 241$

d) $0,241 = 2,41 \cdot 10^{-1}$

$2,41 \cdot 10^{-1} = 2,41 \cdot 0,1 = 0,241$

e) $0,241 = 24,1 \cdot 10^{-2}$

$24,1 \cdot 10^{-2} = 24,1 \cdot 0,01 = 0,241$

f) $0,241 = 241 . 10^{-3}$

$241 . 10^{-3} = 241 . 0,001 = 0,241$

g) $0,000241 = 2,41 . 10^{-4}$

$2,41 . 10^{-4} = 2,41 . 0,0001 = 0,000241$

h) $0,000241 = 24,1 . 10^{-5}$

$24,1 . 10^{-5} = 24,1 . 0,00001 = 0,000241$

i) $0,003412 = 3,412 . 10^{-3}$

$3,412 . 10^{-3} = 3,412 . 0,001 = 0,003412$

06. MACK - O valor de $2x^0 + x^{3/4} + 18x^{-1/2}$, quando $x = 81$, é

$2 . 81^0 + 81^{3/4} + 18 . 81^{-1/2} =$

$2 + 27 + 18 . \frac{1}{81^{\frac{1}{2}}} =$

$2 + 27 + \frac{18}{(34)^{\frac{1}{2}}} = 81^{\frac{1}{2}}$

$81^{\frac{3}{4}} = (34)^{\frac{3}{4}} = 3^{\frac{4}{1} \cdot \frac{3}{4}} =$

$3^{\frac{12}{4}} = 3^3 = 3.3.3 = 27$

$81^{-\frac{1}{2}} = \frac{1}{81^{\frac{1}{2}}}$

$(3^4)^{\frac{1}{2}} = 3^{\frac{4}{2}} = 3^2 = 9$

$\frac{2+27+18}{9}$

$2+27+2 = 31$

18 | 9
18 | 2
0

(B) 31