OPERACIONES EN NOTACIÓN CIENTÍFICA

Realiza las siguientes operaciones con cantidades expresadas en notación científica, sin usar calculadora.



SUMA Y RESTA

A)

$27.4\times10^{17} + 5.6\times10^{18} = \square \times10^{17}$

$4.8\times10^{11} - 4.8\times10^{10} = \square \times10^{11}$

$163.2\times10^{23} + 6.1\times10^{24} = \square \times10^{24}$

$4.0017\times10^{14} - 10.203\times10^{12} = \square \times10^{12}$

$0.0023\times10^{28} + 0.016\times10^{26} = \square \times10^{26}$

$42.17\times10^{-13} + 4.302\times10^{-15} = \square \times10^{-15}$

$0.05\times10^{-21} - 4.51\times10^{-23} = \square \times10^{-21}$

$110\times10^{-8} + 1050\times10^{-10} = \square \times10^{-8}$

$0.00124\times10^{-30} - 0.0206\times10^{-28} = \square \times10^{-28}$

$4.802\times10^{-16} + 0.003\times10^{-14} = \square \times10^{-14}$



MULTIPLICACIÓN

B)

$(23\times10^{4})(2\times10^{3}) = 46\times10^{\square} = 4.6\times10^{\square}$

$-(6\times10^{-8})(5\times10^{-10}) = -30\times10^{\square} = -3\times10^{\square}$

$(-48\times10^{6})(2\times10^{-3}) = -96\times10^{\square} = -9.6\times10^{\square}$

$(5\times10^{-3})(0.2\times10^{-6}) = 0.1\times10^{\square} = 1\times10^{\square}$

$(8\times10^{-15})(2\times10^{3}) = 16\times10^{\square} = 1.6\times10^{\square}$

$(-7\times10^{-11})(-5\times10^{-5}) = 35\times10^{\square} = 3.5\times10^{\square}$



DIVISIÓN

C)

$\frac{21.6\times10^{28}}{2\times10^{8}} = 10.8\times10^{\square} = 1.08\times10^{\square}$

$\frac{2\times10^{-8}}{-4\times10^{4}} = -0.5\times10^{\square} = -5\times10^{\square}$

$\frac{-188\times10^{15}}{2\times10^{-10}} = -94\times10^{\square} = -9.4\times10^{\square}$

$\frac{4.1\times10^{6}}{16.4\times10^{22}} = 0.25\times10^{\square} = 2.5\times10^{\square}$

$\frac{46\times10^{-14}}{2\times10^{-22}} = 13\times10^{\square} = 1.3\times10^{\square}$

$\frac{-3\times10^{-12}}{-4\times10^{-10}} = 0.75\times10^{\square} = 7.5\times10^{\square}$

LIVEWORKSHEETS



POTENCIA

D)

$(8x10^{23})^2 = 64x10^{\square} = 6.4x10^{\square}$

$-(7x10^{-15})^3 = -343x10^{\square} = -3.43x10^{\square}$

$(-9x10^{14})^2 = 81x10^{\square} = 8.1x10^{\square}$

$(-5x10^{-7})^3 = -125x10^{\square} = -1.25x10^{\square}$

$-(22x10^{11})^2 = -484x10^{\square} = -4.84x10^{\square}$

$(-3x10^{4})^{-6} = 729x10^{\square} = 7.29x10^{\square}$



RAÍZ CUADRADA

E)

(Potencia par)

$\sqrt{625x10^{36}} = 25x10^{\square} = 2.5x10^{\square}$

$\sqrt{289x10^{-24}} = 17x10^{\square} = 1.7x10^{\square}$

$\sqrt{169x10^{18}} = 13x10^{\square} = 1.3x10^{\square}$

(Potencia impar)

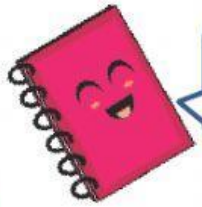
$\sqrt{44.1x10^{29}} = \sqrt{441x10^{\square}} = 21x10^{\square} = 2.1x10^{\square}$

$\sqrt{2250x10^{15}} = \sqrt{225x10^{\square}} = 15x10^{\square} = 1.5x10^{\square}$

$\sqrt{129.6x10^{-41}} = \sqrt{1296x10^{\square}} = 36x10^{\square} = 3.6x10^{\square}$

$\sqrt{1440x10^{-27}} = \sqrt{144x10^{\square}} = 12x10^{\square} = 1.2x10^{\square}$

$\sqrt{32.4x10^{-11}} = \sqrt{324x10^{\square}} = 18x10^{\square} = 1.8x10^{\square}$



OPERACIONES COMBINADAS

F)

$$\frac{(-5x10^{40})(6x10^{-8})}{(-2x10^{-6})^2} = \frac{-30x10^{\square}}{4x10^{\square}} = -7.5x10^{\square}$$

$$\frac{(8x10^{-15})^3}{2\sqrt{64x10^{28}}} = \frac{512x10^{\square}}{2\,(8x10^{\square})} = 32x10^{\square} = 32.2x10^{\square}$$

LIVEWORKSHEETS