

Révision de notation scientifique

Notation Scientifique:

1. Write the following numbers in scientific notation:

a) 5,500,000,000

$$5.5 \times 10^9$$

b) 780

$$7.8 \times 10^2$$

23,010,000

$$= 2.301 \times 10^7$$

c) 0.091

$$9.1 \times 10^{-2}$$

d) 0.000003004

$$3.004 \times 10^{-6}$$

2. Write the following numbers in regular notation:

a) 5.5×10^{-7}

$$0,00000055$$

b) 7.1×10^{10}

$$71\,000\,000\,000$$

c) 1.0×10^3

$$1000$$

3. Compute the following:

a) $10^3 \times 10^5$

$$= 10^8$$

b) $4 \times 10^{-3} \times -5 \times 10^{-5}$

$$= -20 \times 10^{-8} \Rightarrow -2,0 \times 10^{-7}$$

c) $10^{-3} \times 10^5$

$$= 10^2$$

d) $(8.0 \times 10^5)(1.2 \times 10^8)$

$$= 9,6 \times 10^{13}$$

e) $10^3 \div 10^5$

$$= 10^{3-5}$$

$$= 10^{-2}$$

f) $2.3 \times 10^{-3} \div 1.0 \times 10^{-5}$

$$= 2.3 \times 10^2$$

g) $10^{-3} \div 10^5$

$$= 10^{-3-5}$$

$$= 10^{-8}$$

h) $(8.0 \times 10^5) \div (1.2 \times 10^8)$

$$= 7,2 \times 10^{-3}$$

i) $(3 \times 10^8)^2$

$$(ab)^2 = a^2 b^2$$

$$\text{et } (a^m)^n = a^{m \times n}$$

$$= 9 \times 10^{16}$$

j) $\sqrt{4 \times 10^8} = (4 \times 10^8)^{\frac{1}{2}}$

$$= \sqrt{4} \times \sqrt{10^8}$$

$$= 2 \times 10^4$$