

PUISSANCES DE 10

EXERCICE 3

EXERCICE 1 :

Donner le résultat sous la forme « 10^n » :

$$A = 10^4 \times 10^{-8} \times 10^5$$

$$B = (10^{-2})^3 \times (10^3)^4$$

$$C = \frac{10^4 \times 10^{-1} \times 10^{-5}}{10^{-7} \times 10^6 \times 10^{-3}}$$

$$D = \frac{(10^{-5})^6}{(10^4)^{-8}}$$

$$E = \frac{\frac{10^4}{10^{-5}}}{\frac{10^{-3}}{10^2}}$$

$$F = \left(\left((10^{-2})^3 \right)^{-4} \right)^{-1}$$

EXERCICE 2

Donner le résultat sous la forme « 10^n » :

$$A = 10^{-2} \times 10^9 \times 10 \times 10^2 \times 10^{-5}$$

$$B = \frac{10^6}{10^{-2}} \times \frac{10^{-2}}{10^{-5}} \times \frac{10^{-5}}{10^4}$$

$$C = 10^4 \times \frac{10^6}{10^9} \times \frac{10^{-4}}{10^0} \times \frac{1}{10^5}$$

$$D = \frac{(10^{-2})^3}{(10^{-1})^4} \times \frac{(10^{-8})^{-2}}{(10^{-5})^3}$$

$$E = (10^{-9} \times 10^{-3} \times 10^{14} \times 10 \times 0,1)^{-2}$$

$$F = \left[\frac{10^{-3}}{10^{-5}} \times \left(\frac{10^1}{10^{-1}} \right)^{-3} \right]^{-5}$$

EXERCICE 3 : Compléter les pointillés :

$10^4 \times 10^{\dots} = 10^{-1}$	$10^{-5} \times 10^{\dots} \times 10^{-2} = 10^3$
$\frac{1}{10^{\dots}} = 10^6$	$\frac{10^{-3}}{10^{\dots}} = 10^{-5}$
$\frac{10^{-4} \times 10^9}{10^{\dots} \times 10^{-2}} = 10^8$	$\frac{10^{-1} \times 10^5 \times 10^{\dots}}{10^{-3} \times 10^7 \times 10^2} = 10^{-3}$
$(10^3)^{\dots} = 10^{-6}$	$(10^{\dots})^{-4} = 10^{12}$
$\left[(10^{-1})^{-3} \right]^{\dots} = 10^{-9}$	$\frac{1}{(10^{-5})^{\dots}} = 10^{15}$
$10^{11} \times 10^{\dots} = 10^{-5} \times 10^9$	$\frac{10^{-3}}{10^{\dots}} = \frac{10^{-5}}{10^{-9}}$

EXERCICE 4

Calculer :

$$a. 54\,321,098\,76 \times 10^2 = \mathbf{5\,432\,109,876}$$

$$b. 54\,321,098\,76 \times 10^{-2} =$$

$$c. 54\,321,098\,76 \times 10^4 =$$

$$d. 54\,321,098\,76 \times 10^{-3} =$$

$$e. 54\,321,098\,76 \times 10^5 =$$

$$f. 54\,321,098\,76 \times 10^{-4} =$$

$$g. 54\,321,098\,76 \times 10^{-1} =$$

$$h. 54\,321,098\,76 \times 10^7 =$$

$$i. 54\,321,098\,76 \times 10^{-6} =$$

$$j. 54\,321,098\,76 \times 10^0 =$$

EXERCICE 5

Calculer :

$$a. 6,08 \times 10^5 = \mathbf{608\,000}$$

$$b. -87,52 \times 10^3 =$$

$$c. 8,0002 \times 10^3 =$$

$$d. 0,00875 \times 10^7 =$$

$$e. 67,04 \times 10^{-1} =$$

$$f. -965,297 \times 10^{-2} =$$

$$g. -6,153372 \times 10^4 =$$

$$h. 807,5 \times 10^{-5}$$

$$i. 953\,000\,000 \times 10^{-5} =$$

$$j. -41\,765\,300 \times 10^{-2} =$$

EXERCICE 6

Compléter les pointillés :

$$a. 6,08 \times 10^{\dots} = 608\,000$$

$$b. 87,52 \times 10^{\dots} = 875,2$$

$$c. 764,987 \times 10^{\dots} = 7,64987$$

$$d. 9\,875 \times 10^{\dots} = 98\,750\,000$$

$$e. 49\,518 \times 10^{\dots} = 0,495\,18$$

$$f. 642,063\,2 \times 10^{\dots} = 642\,063\,200$$

$$g. 40\,328,16 \times 10^{\dots} = 0,000\,040\,328\,16$$

$$h. 923,923 \times 10^{\dots} = 9\,239\,230\,000\,000$$

$$i. 328\,143,684 \times 10^{\dots} = 0,000\,000\,032\,814\,368\,4$$

$$j. 32,81 \times 10^{\dots} = 3\,281\,000\,000\,000\,000\,000\,000$$