

Exercices puissances

Exercice 1 compléter (utilisez votre calculatrice si besoin)

$$3 \times 3 \times 3 = 3^{\underline{3}} = \underline{27}$$

$$2^4 = \underline{16} \quad 3^2 = \underline{9} \quad 5^3 = \underline{125} \quad 2^2 = \underline{4}$$

$$10 \times 10 \times 10 = 10^{\underline{3}} = \underline{1\,000}$$

$$10 \times 10 \times 10 \times 10 = 10^{\underline{4}} = \underline{10\,000}$$

$$10 \times 10 \times 10 \times 10 \times 10 = 10^{\underline{5}} = \underline{100\,000}$$

$$10 \times 10 \times 10 \times 10 \times 10 \times 10 = 10^{\underline{6}} = \underline{1\,000\,000}$$

Exercice 2 compléter (utilisez votre calculatrice si besoin)

$$2 \times 10 \times 10 \times 10 \times 10 = \underline{2} \times 10^{\underline{4}} = \dots\dots\dots$$

$$25 \times 10 \times 10 \times 10 = \underline{25} \times 10^{\underline{3}} = \dots\dots\dots$$

$$2,15 \times 10 \times 10 \times 10 \times 10 \times 10 = \underline{2,15} \times 10^{\underline{5}} = \dots\dots\dots$$

$$2 \times 10 \times 10 = \underline{2} \times 10^{\underline{2}} = \underline{200}$$

Exercice 3 compléter (utilisez votre calculatrice si besoin)

$$10^{-5} = \underline{0,00001}$$

$$10^{-2} = \underline{0,01}$$

$$10^{-8} = \underline{0,00000001}$$

$$10^{-1} = \underline{0,1}$$

$$2 \times 10^{-3} = \underline{0,002}$$

$$12 \times 10^{-3} = \underline{0,012}$$

$$7 \times 10^{-5} = \underline{0,00007}$$

$$540 \times 10^{-8} = \underline{0,000054}$$

$$2 \times 10^{-3} = \underline{0,002}$$

$$32 \times 10^{-5} = \underline{0,0032}$$

$$2 \times 10^{-1} = \underline{0,2}$$

$$2,13 \times 10^{-4} = \underline{0,000213}$$

Exercice 4 compléter (utilisez votre calculatrice si besoin)

25 000 000	25 × $\underline{1\,000\,000}$	25 × $10^{\underline{6}}$
25 000 000	250 × $\underline{100\,000}$	250 × $10^{\underline{5}}$
25 000 000	2500 × $\underline{1\,000}$	2500 × $10^{\underline{4}}$
25 000 000	2,5 × $\underline{1\,000\,000}$	2,5 × $10^{\underline{7}}$
25 000 000	0,25 × $\underline{1\,000\,000\,000}$	0,25 × $10^{\underline{9}}$
25 000 000	0,025 × $\underline{1\,000\,000\,000}$	0,025 × $10^{\underline{9}}$

Exercice 5 compléter (utilisez votre calculatrice si besoin)

Ecriture décimale	Ecriture scientifique	Ecriture de la machine
25 000 000	$2,5 \times 10^7$	
2 000	2×10^3	
7 000 000	7×10^6	
71 000 000	$7,1 \times 10^7$	
- 712 000	$- 7,12 \times 10^5$	
..... 15000	$1,5 \times 10^4$	
..... 250	$2,5 \times 10^2$	
..... - 2500	$-2,5 \times 10^3$	
..... 7750000000	$7,75 \times 10^9$	

Exercice 6 compléter (utilisez votre calculatrice si besoin)

$$3^2 \times 3^4 = 3^6 = 729$$

$$10^2 \times 10^5 = 10^7 = 10000000$$

$$10^{-2} \times 10^6 = 10^4 = 10000$$

$$\frac{2^3}{2^7} = 2^{-4} = 0,0625$$

$$\frac{2^7}{2^5} = 2^2 = 4$$

$$\frac{10^6}{10^2} = 10^4 = 10000$$

$$(2^2)^3 = 2^6 = 64$$

$$(10^3)^5 = 10^{15} = 1000000000000000$$

$$(2 \times 3)^2 = 2^2 \times 3^2 = 4 \times 9 = 36 \quad \text{ou} \quad 6^2 = 36$$

$$(5 \times 3)^3 = 5^3 \times 3^3 = 125 \times 27 = 3375 \quad \text{ou} \quad 15^3 = 3375$$

$$(2 \times 5)^6 = 2^6 \times 5^6 = 64 \times 15625 = 1000000 \quad \text{ou} \quad 10^6 = 1000000$$

$$\left(\frac{3}{2}\right)^3 = \frac{3^3}{2^3} = \frac{27}{8} = 3,375$$

$$\left(\frac{10}{5}\right)^2 = \frac{10^2}{5^2} = \frac{100}{25} = 4$$