EXERCICE 6B.1 - Calculer :

a.	$(-4)^3 =$	$\mathbf{(-4) \times (-4) \times (-4)}$	$\mathbf{= -64}$
b.	$5^4 =$		$=$
c.	$(-6)^3 =$		$=$
d.	$2^6 =$		$=$
e.	$(-10)^3 =$		$=$
f.	$2^8 =$		$=$
g.	$(-3)^4 =$		$=$
h.	$(0,1)^3 =$		$=$
i.	$(-5)^5 =$		$=$
j.	$(-100)^5 =$		$=$

EXERCICE 6B.2 - Calculer :

a.	$4^{-3} =$	$\mathbf{\frac{1}{4^3} = \frac{1}{4 \times 4 \times 4}}$	$\mathbf{= \frac{1}{64}}$
b.	$(-2)^{-5} =$		$=$
c.	$3^{-4} =$		$=$
d.	$(-10)^{-4} =$		$=$
e.	$(-0,2)^5 =$		$=$
f.	$\left(\frac{1}{4}\right)^3 =$		$=$
g.	$\left(-\frac{2}{3}\right)^4 =$		$=$
h.	$\left(-\frac{3}{4}\right)^2 =$		$=$
i.	$\left(-\frac{1}{5}\right)^{-3} =$		$=$
j.	$\left(-\frac{2}{5}\right)^{-4} =$		$=$

EXERCICE 6B.3 - Donner le résultat des calculs suivants sous la forme « a^n » :

a. $5^2 \times 5^4 = 5^{2+4} = \mathbf{5^6}$	***b.*** $4^{-3} \times 4^8 =$	***c.*** $(-6)^{-7} \times (-6)^2 =$	***d.*** $(-3)^7 \times (-3)^{-4} =$
e. $5^{-3} \times 5^{-1} \times 5^8 =$	***f.*** $7^9 \times 7^{-8} \times 7^{-3} =$	***g.*** $(-8)^2 \times (-8)^{-5} \times (-8)^{-1} =$	***h.*** $9^2 \times 9^{-1} \times 9^{-7} \times 9^{-4} =$
i. $\frac{5^7}{5^3} = 5^{7-3} = \mathbf{5^4}$	***j.*** $\frac{7^{-4}}{7^3} =$	***k.*** $\frac{(-6)^{-6}}{(-6)^{-1}} =$	***l.*** $\frac{(-5)^6}{(-5)^{-16}} =$
m. $\frac{(-1)^{-12}}{(-1)^{-8}} =$	***n.*** $\frac{23^{-14}}{23^{-21}} =$	***o.*** $\frac{(-3)^{-9}}{(-3)^6} =$	***p.*** $\frac{2^{-3}}{2^3} =$
q. $\left(3^{-2}\right)^7 = 3^{-2 \times 7} = \mathbf{3^{-14}}$	***r.*** $\left(\left(-5\right)^{-7}\right)^{-1} =$	***s.*** $\left(\left(-2\right)^4\right)^{-3} =$	***t.*** $\left(12^7\right)^3 =$
u. $\left(8^{-8}\right)^8 =$	***v.*** $\left(\left(-9\right)^{-7}\right)^{-2} =$	***w.*** $\left(\left(-0,6\right)^{-11}\right)^{-3} =$	***x.*** $\left(7^{-8}\right)^0 =$

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EXERCICE 6B.1 - Calculer :

a.	$(-4)^3 =$	**(-4) × (-4) × (-4)**	**= -64**
b.	$5^4 =$	**5 × 5 × 5 × 5**	**= 625**
c.	$(-6)^3 =$	**(-6) × (-6) × (-6)**	**= -216**
d.	$2^6 =$	**2 × 2 × 2 × 2 × 2 × 2**	**= 64**
e.	$(-10)^3 =$	**(-10) × (-10) × (-10)**	**= -1 000**
f.	$2^8 =$	**2 × 2 × 2 × 2 × 2 × 2 × 2 × 2**	**= 256**
g.	$(-3)^4 =$	**(-3) × (-3) × (-3) × (-3)**	**= 81**
h.	$(0,1)^3 =$	**0,1 × 0,1 × 0,1**	**= 0,001**
i.	$(-5)^5 =$	**(-5) × (-5) × (-5) × (-5) × (-5)**	**= -3 125**
j.	$(-100)^5 =$	**(-100) × (-100) × (-100) × (-100) × (-100)**	**=-10 000 000 000**

EXERCICE 6B.2 - *Calculer :*

a.	$4^{-3} =$	$\frac{1}{4^3} = \frac{1}{4\times4\times4}$	$= \frac{1}{64}$
b.	$(-2)^{-5} =$	$\frac{1}{(-2)^5} = \frac{1}{(-2)\times(-2)\times(-2)\times(-2)\times(-2)}$	$= \frac{1}{-32} = -\frac{1}{32}$
c.	$3^{-4} =$	$\frac{1}{3^4} = \frac{1}{3\times3\times3\times3}$	$= \frac{1}{81}$
d.	$(-10)^{-4} =$	$\frac{1}{(-10)^4} = \frac{1}{10^4} = \frac{1}{10\times10\times10\times10}$	$= \frac{1}{10000}$
e.	$(-0,2)^5 =$	**(-0,2) × (-0,2) × (-0,2) × (-0,2) × (-0,2)**	**= -0,000 32**
f.	$\left(\frac{1}{4}\right)^3 =$	$\frac{1}{4}\times\frac{1}{4}\times\frac{1}{4}$	$= \frac{1}{64}$
g.	$\left(-\frac{2}{3}\right)^4 =$	$\left(-\frac{2}{3}\right)\times\left(-\frac{2}{3}\right)\times\left(-\frac{2}{3}\right)\times\left(-\frac{2}{3}\right)$	$= \frac{16}{81}$
h.	$\left(-\frac{3}{4}\right)^2 =$	$\left(-\frac{3}{4}\right)\times\left(-\frac{3}{4}\right)$	$= \frac{9}{16}$
i.	$\left(-\frac{1}{5}\right)^{-3} =$	$\frac{1}{\left(-\frac{1}{5}\right)^3} = \frac{1}{\left(-\frac{1}{5}\right)\times\left(-\frac{1}{5}\right)\times\left(-\frac{1}{5}\right)} = -\frac{1}{\frac{1}{125}}$	$= -125$
j.	$\left(-\frac{2}{5}\right)^{-4} =$	$\frac{1}{\left(-\frac{2}{5}\right)^4} = \frac{1}{\left(-\frac{2}{5}\right)\times\left(-\frac{2}{5}\right)\times\left(-\frac{2}{5}\right)\times\left(-\frac{2}{5}\right)} = \frac{1}{\frac{16}{625}}$	$= \frac{625}{16}$

EXERCICE 6B.3 - Donner le résultat des calculs suivants sous la forme « a^n » :

$5^2\times5^4 = 5^{2+4} = \mathbf{5^6}$	$4^{-3}\times4^8 = 4^{-3+8} = 4^5$	$(-6)^{-7}\times(-6)^2 = \mathbf{(-6)^{-7+2} = (-6)^{-5}}$	$(-3)^7\times(-3)^{-4} = \mathbf{(-3)^{7-4} = (-3)^3}$
$5^{-3}\times5^{-1}\times5^8 = \mathbf{5^{-3-1+8} = 5^4}$	$7^9\times7^{-8}\times7^{-3} = \mathbf{7^{9-8-3} = 7^{-2}}$	$(-8)^2\times(-8)^{-5}\times(-8)^{-1} = \mathbf{(-8)^{-4}}$	$9^2\times9^{-1}\times9^{-7}\times9^{-4} = \mathbf{9^{2-1-7-4} = 9^{-10}}$
$\frac{5^7}{5^3} = 5^{7-3} = \mathbf{5^4}$	$\frac{7^{-4}}{7^3} = 7^{-4-3} = 7^{-7}$	$\frac{(-6)^{-6}}{(-6)^{-1}} = (-6)^{-6-(-1)} = (-6)^{-6+1} = (-6)^{-5}$	$\frac{(-5)^6}{(-5)^{-16}} = (-5)^{6-(-16)} = (-5)^{6+16} = (-5)^{22}$

$\dfrac{(-1)^{-12}}{(-1)^{-8}} = (-1)^{-12-(-8)}$ $= (-1)^{-4}$	$\dfrac{23^{-14}}{23^{-21}} = 23^{-14-(-21)}$ $= 23^{-14+21} = 23^{7}$	$\dfrac{(-3)^{-9}}{(-3)^{6}} = (-3)^{-9-6} = (-3)^{-15}$	$\dfrac{2^{-3}}{2^{3}} = 2^{-3-3} = 2^{-6}$
$\left(3^{-2}\right)^{7} = 3^{-2\times 7} = 3^{-14}$	$\left((-5)^{-7}\right)^{-1} = (-5)^{-7\times(-1)}$ $= (-5)^{7}$	$\left((-2)^{4}\right)^{-3} = (-2)^{4\times(-3)} = (-2)^{-12}$	$\left(12^{7}\right)^{3} = 12^{7\times 3} = 12^{21}$
$\left(8^{-8}\right)^{8} = 8^{-8\times 8}$ $= 8^{-64}$	$\left((-9)^{-7}\right)^{-2} = (-9)^{-7\times(-2)}$ $= (-9)^{14}$	$\left((-0,6)^{-11}\right)^{-3} = (-0,6)^{-11\times(-3)}$ $= (-0,6)^{33}$	$\left(7^{-8}\right)^{0} = 1$