Potencias

Potencia	Base	Exponente	multiplicación	Valor
5^2	5	2	5x5	25
5^2	5	2	5x5	25
8^4	8	4	8x8x8x8	4096
6^2	6	2	6x6	36
9^2	9	2	9x9	81
7^3	7	3	7x7x7	343
7^7	7	7	7x7x7x7x7x7x7	823 543
5^6	5	6	5x5x5x5x5x5	15 625

1) Observa y calcula

- $3^2 = 3 \cdot 3 = 9$
- $7^1 = 7$
- $2^5 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 32$
- $5^0 = 0$
- $9^2 = 9 \cdot 9 = 81$
- $6^3 = 6 \cdot 6 \cdot 6 = 216$
- $0^5 = 0$
- $3^4 = 3 \cdot 3 \cdot 3 \cdot 3 = 81$
- $1^7 = 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 = 1$
- $5^3 = 5 \cdot 5 \cdot 5 = 125$
- $8^4 = 8 \cdot 8 \cdot 8 \cdot 8 = 4096$
- $(-3)^2 = -3 \cdot -3 = 9$
- $(-3)^3 = -3 \cdot -3 \cdot -3 = -27$
- $-2^2 = -2 \cdot -2 = 4$
- $-2^3 = -2 \cdot -2 \cdot -2 = -8$
- $(-1)^2 = -1 \cdot -1 = 1$
- $(-1)^3 = -1 \cdot -1 \cdot -1 = -1$
- $(-4)^0 = 1$

2) Expresa como una potencia única

$\frac{3^7}{3^5} = 3^2$

$\frac{3^5}{3^4} = 3^{5-4}$

$\frac{2^{12}}{2^8} = 2^{12-8}$

$\frac{7^{25}}{7^{15}} = 7^{25-15}$

$\frac{5^{10}}{5^7} = 5^{10-7}$

$\frac{9^5}{9} = 9^{5-1}$

3) Expresa como única potencia

$2^9 \cdot 2^3 = 2^{9+3}$ $(-5^4)^3 = -5^{4\cdot3}$ $7^8 : 7^6 = \frac{7^8}{7^6}$ $(5^9)^2 = 5^{9\cdot2}$

$3^{10} : 3^6 = \frac{3^{10}}{3^6}$ $2^8 : 2 = \frac{2^8}{2}$ $\frac{5^{10}}{5^7} = 5^{10-7}$ $9^4 \cdot 9^3 = 9^{4+3}$

$\frac{5^{10}}{5^7} = 5^{10-7}$ $\frac{4^{17}}{4^7} = 4^{17-7}$ $(3^8)^2 = 3^{8\cdot2}$ $0^4 \cdot 0^2 = 0^{4+2}$

4) Utiliza las propiedades de las potencias

$8^5 : 2^5 = (8:2)^5 = 4^5$ $\frac{8^5}{2^5} = 4^5$

$15^6 : (-3)^6 = (15:3)^6 = (-5)^6$ $\frac{15^6}{-3^6} = -5$

$21^2 : 7^2 = (21:7)^2 = 3^2$ $\frac{21^2}{7^2} = 3^2$

$\frac{6^7}{3^7} = \left(\frac{6}{3}\right)^7 = 2^7$ $(6:3)^7 = 2^7$