

## OPERATIONS WITH POWERS I

- Multiplication of powers with the same base

$$\underline{3}^3 \times \underline{3}^4 = \underline{3}^{3+4}$$

Exercise 1.- Multiply these powers and express the result as an only power:

a)  $5^4 \cdot 5^2 =$

d)  $10 \cdot 10^2 =$

g)  $a^8 \cdot a^2 \cdot a =$

b)  $2^{12} \cdot 2^3 =$

e)  $x^3 \cdot x^2 =$

h)  $b \cdot b =$

c)  $6^2 \cdot 6^5 \cdot 6 =$

f)  $m^6 \cdot m^3 =$

i)  $9^2 \cdot 9^7 =$

- Division of powers with the same base

$$5^{20} \div 5^{17} = 5^{20-17} = 5^3$$

Exercise 2.- Divide these powers and express the result as an only power:

a)  $5^4 : 5^2 =$

d)  $3^9 : 3^3 =$

g)  $x^7 : x^2 =$

b)  $10^6 : 10^3 =$

e)  $a^3 : a^2 =$

h)  $m^2 : m^2 =$

c)  $5^8 : (5^6 : 5^4) =$

f)  $(5^5 \cdot 5^3) : 5^7 =$

- Power of a powers

$$(7^3)^4 = 7^{3 \cdot 4} = 7^{12}$$

a)  $(3^2)^4 =$

c)  $(10^5)^3 =$

e)  $(9^6)^2 =$

b)  $(x^5)^2 =$

d)  $[(2^3)^2]^5 =$

f)  $[(a^2)^4]^2 =$