

Nombre:

Fecha:

1. (1p) Read the powers and their calculated values:     $a) 12^2$      $b) 9^3$      $c) 7^4$      $d) 2^5$

2. (1p) Find the number  $x$ :     $a) x^3 = 125$      $b) 3^x = 81$      $c) x^6 = 64$      $d) 4^x = 256$

3. (1p) Expresa, usando potencias de 10:

$a)$  Mil seiscientos millones     $b)$  Trescientos cuarenta mil millones

4. (1p) Write the number 23709215 in expanded form using powers of ten:

5. (2p) Write as a single power, if possible:

a)  $(4^7 \cdot 4^4) \cdot (4^8 \div 4^7)$       b)  $2^{15} \div 2^7 \cdot 2^3$       c)  $(7^3)^4 \cdot (3^6)^2$       d)  $(3^6 \cdot 4^6) \div (18^6 \div 3^6)$

6. (1p) Calculate the value of the following powers:    a)  $0^1$       b)  $1^1$       c)  $1^0$       d)  $0^0$

7. (1p) Read the root and its calculated value:  $\sqrt{169}$

8. (1p) Calculate  $\sqrt{700}$  (integer root)

9. (1p) You have one hundred and fifty square tiles with sides measuring twenty-five cm. What is the largest square floor space you can cover without cutting any tiles? How many tiles are left?

\*. (1p) Escribe:    a) 1966 En números romanos      b) CDLXXIV en numeración decimal

1. (1p) a)  $12^2 = 144$  Twelve squared is one hundred and forty-four.  
b)  $9^3 = 729$  Nine cubed is seven hundred and twenty-nine  
c)  $7^4 = 2401$  Seven to the fourth power is two thousand four hundred and one.  
d)  $2^5 = 32$  Two to the fifth power is thirty-two.
2. (1p) a)  $x = 5$     b)  $x = 4$     c)  $x = 2$     d)  $x = 4$
3. (1p) a)  $1.600.000.000 = 16 \cdot 10^8$     b)  $340.000.000.000.000.000 = 34 \cdot 10^{16}$
4. (1p)  $2 \cdot 10^7 + 3 \cdot 10^6 + 7 \cdot 10^5 + 9 \cdot 10^3 + 2 \cdot 10^2 + 1 \cdot 10^1 + 5 \cdot 10^0$
5. (2p) a)  $4^{12}$     b)  $2^{11}$     c)  $21^{12}$     d)  $2^6$
6. (1p) a) 0    b) 1    c) 1    d) Indeterminate
7. (1p)  $\sqrt{169} = 13$  The square root of one hundred and sixty-nine is thirteen.
8. (1p)  $26^2 = 676 \Rightarrow \sqrt{700} = 26, \quad R = 700 - 676 = 14$
9. (1p)  $12^2 = 144 \Rightarrow \sqrt{150} = 12, \quad R = 6$   
You can cover a squared floor with sides  $12 \cdot 25 = 300 \text{ cm}$  (3 m).  
The squared space is  $3^2 = 9 \text{ m}^2$   
There are 6 tiles left
- \*. (1p) a) CMMLXVI    b) 474