EXAMEN NÚMEROS NATURALES, POTENCIAS Y RAÍCES - 1º ESO - MODELO A

Exercise 1: (1 point) Work out the value of these powers and write the answer with words in English

a) $2^7 =$
b) $10^5 =$
c) $7^0 =$
d) $5^4 =$
e) $1^{23} =$

Ejercicio 2: (2 puntos) Calcula:

a) $5+6:2-3+2\cdot 7=$
b) $25-2\cdot(3+4\cdot 2-1)+5\cdot 0-1^3=$
c) $2\cdot\sqrt{25}+7-(4-\sqrt{9})^5+3^2=$
d) $(\sqrt{81}-\sqrt{36})^2+5\cdot 2^3-3+20:4=$

Exercise 3: (0.5 points) Round each quantity to two significant figures and then express it as the product of a natural number and a power of base 10

a) 9 476 739 000 000 =
b) 18 275 493 000 000 000 =

Exercise 4: (1 point) John buys three DVDs, €15 each, and seven T-shirts, €9 each. If he pays with a €100 bill, how much money will he get in return?

Exercise 5: (0.75 points) We want to plant trees filling a square, with 23 trees on every side. How many trees do we need?

Ejercicio 6: (1 point) Expresa el resultado como una sola potencia:

a) $(x^5\cdot x\cdot x^4)^4 : x^3 =$
b) $2^4\cdot 5^2 =$
c) $(5^3\cdot 5^4):(5^6\cdot 5)=$
d) $3^9\cdot 8^9 : 6^9 =$

Exercise 7: (1.5 points) Calculate:

a) $5\sqrt{7}+2\sqrt{5}+\sqrt{3}+5\sqrt{3}+\sqrt{5}-2\sqrt{7}-6\sqrt{3}=$
b) $\sqrt{5}\cdot\sqrt{2}\cdot\sqrt{10}=$
c) $(\sqrt{50}:\sqrt{2})\cdot(\sqrt{27}:\sqrt{3})=$

Ejercicio 8: (0.5 puntos) Acota el valor de estas raíces cuadradas e indica cuál es la raíz entera:

a) $\sqrt{93}$
b) $\sqrt{47}$

Exercise 9: (1.25 points) We have a square field with an area of 6400 m^2 and we want to buy wire fence to round it. How many meters do we need? If every meter of wire fence costs €20, how much money will it cost?

Ejercicio 10: (0.5 puntos) Calcula el número expresado en cada caso:

a) $7\cdot 10^5+5\cdot 10^4+10^3+2\cdot 10^2+9\cdot 10+6=$
b) $4\cdot 10^7+2\cdot 10^4+10^2+5\cdot 10=$