FRACTIONS TEST - 2º ESO

Exercise 1: **(1.5 points)** Write the following numbers using scientific notation:
  a) The distance between Mars and the Earth: 59 000 000 000 m
  b) The mass of an electron: 0.000 000 000 000 000 000 000 000 000 910 g
  c) $1378.4972 \cdot 10^{-5} =$
  d) $0.004723 \cdot 10^{-7} =$

Exercise 2: (1 point) Write the following fractions in order of size, starting with the smallest:

$$\frac{8}{5} \qquad \frac{9}{20} \qquad \frac{7}{10} \qquad 1 \qquad \frac{14}{15}$$

Exercise 3: (0.75 points) Find the missing numbers in each of the following equivalent fractions:

a) $\dfrac{7}{x} = \dfrac{2}{6}$
b) $\dfrac{6}{8} = \dfrac{x}{24} = \dfrac{3}{y}$
c) $\dfrac{x}{3} = \dfrac{12}{x}$

Exercise 4: (1 point) In a school one third of the students play football and two fifths attend the music school. The remaining one hundred and sixty students attend particular classes. How many students are there in the school?

Exercise 5: (1 point) Classify the following numbers and then convert them into fractions
  a) 0'009289
  b) 2'22···
  c) 3'527777777···
  d) π

Ejercicio 6: (2.25 ptos) Work out the value of the following expressions:

a) $\dfrac{5}{6} + \dfrac{3}{5} \cdot \dfrac{7}{2} - \left(\dfrac{3}{2}\right)^2 + \dfrac{9}{10} : \dfrac{2}{3} =$

b) $\dfrac{3}{20} - \dfrac{7}{4} \cdot \left(\dfrac{1}{2} - \dfrac{4}{5}\right)^2 - \sqrt{\dfrac{1}{100}} : \dfrac{2}{5} =$

c) $\sqrt{\dfrac{16}{25}} : \dfrac{3}{7} - \left(-\dfrac{3}{2}\right)^3 + 2^{-2} =$

Ejercicio 7: (1 pto) Work out the value of the following expressions:

a) $\left(3^{-1} \cdot 3^{-5}\right) : \left(3 \cdot 3^{-2}\right) =$

b) $\left(\dfrac{5}{2}\right)^{-4} \cdot \left(\dfrac{2}{5}\right)^2 \cdot \left(\dfrac{1}{5}\right)^{-5} \cdot 5^{-7} =$

Exercise 8: (1.5 ptos) Last week I bought a one liter bottle of soda. I drank one quarter and then my brother drank two thirds of what was left.
a) What fraction of the bottle remains?
b) My mom wants a glass with 25 cl of soda. Is there enough liquid left in the bottle?