PROPORTION AND STATISTICS TEST - 3º ESO

Exercise 1: (0.75 points) Fill in the gaps in the following tables and work out the value of the constant of proportion, knowing that the magnitudes involved are directly proportional:

18		9	27		
	5	2		17	10

Exercise 2: (1 point) Find the selling price per kilo of a nuts mixture made from 300 grams of hazelnuts that costs 12€/kg and 200 grams of almonds that costs 15€/kg.

Exercise 3: (1 point) Split €2790 in an inversely proportional way to 1, 3 and 7

Exercise 4: (1 point) With twenty-four bags of fodder I can feed seventeen sheep during twenty days. How long can I feed thirty sheep with eighteen bags of fodder?

Exercise 5: (1.25 points) The price of a tablet was 225€. A certain store was accused of foul play.
   a) If before Black Friday they increased the price by 15%, what was the new price?
   b) What's the price after a 25% discount on Black Friday?
   c) What's the real percentage discount?

Exercise 6: (1 point) I want to know if teenagers from Córdoba are going abroad this summer, and where, so I asked all the students from Bachelorette from La Salle. Classify the random variable, indicate the population and the sample and tell me if my study is a valid one.

Exercise 7: (2.25 points) Given the following table showing the values and frequencies of a certain random variable

x_i	1	2	3	4	5
f_i	3	5	7	8	2

   a) Classify the variable (0.25)
   b) Find the percentage corresponding to each value of the variable (0.5)
   c) Find Pearson's coefficient of variation (1)
   d) Plot the bar diagram, the histogram and the frequency polygon (0.5)

Exercise 8: (1.75 points) Given the following table showing the values and frequencies of a certain random variable, work out:

x_i	[1,5]	(5,9]	(9,13]	(13,17]
f_i	1	4	6	3

   a) Classify the variable (0.25)
   b) The range (0.25)
   c) The measures of central tendency (0.75)
   d) The frequency polygon (0.5)