PROPORTION AND STATISTICS TEST

3º ESO

Exercise 1: (1.25 points)

a) A couple bought a car whose initial price was of 13500€, but the seller was offering a 15% discount and the car's company, another 7.5% discount. What's the final price of the car?

b) The price of a kilo of coffee was of 2.7€ at the beginning of the year, but due to the drought, it was increased by 75% during the summer. Yup, I'm crying. Now things seem to go better and the price has gone down, 40%. How much will I have to pay now? Do I need to ask the bank for a loan?

Exercise 2: (1.25 points) Seventeen men need to work for a week to install the 1.6 million of Christmas lights in the city. How many days would twenty men have to work in order to install 2 million lights in another city? Round the answer to days and hours.

Exercise 3: (1.25 points) Split 2431€ in an inversely proportional way to 5, 7 and 9

Exercise 4: (0.75 points) The price of milk has increased by 57% due to the war and some other factors. If a liter costs now 0.91€, what was the original price?

Exercise 5: (1 point) I want to know if Christmas cactuses will really bloom at the beginning of winter, or if they are changing their cycles due to climate change. Last month I went to a flower store, I bought 10 plants and I have them there by the window waiting for the flowers to appear.
Indicate the population, the sample, classify the random variable and tell me if my survey is a good one or I got it all wrong again.

Exercise 6: (2.5 points) Given the following table showing the values and frequencies of a certain random variable

x_i	0	1	3	4	5
f_i	8	5	10	8	4

a) Classify the variable. How many people did I ask for my survey? (0.5)
b) Find the percentage corresponding to each value of the variable (0.5)
c) Find Pearson's coefficient of variation (1)
d) Plot the frequency polygon (0.5)

Exercise 7: (2 points) Given the following table representing a random variable:

x_i	[0,2]	(2,4]	(4,6]	(6,8]
f_i	9	6	11	8

a) Classify the variable (0.25)
b) Find the range (0.25)
c) Find the measures of central tendency (1)
d) Plot the bar diagram, the histogram and the frequency polygon (0.5)