PROPORTION AND STATISTICS TEST - 3° ESO

Exercise 1: (1.5 points) Determine if the following tables correspond to magnitudes directly or inversely proportional, fill in the gaps and find the values of the constants of proportionality

2	5		0.5	10	15	
	12	1		6		3

6	3			12	20	
9		12	15	18		0.75

Exercise 2: (1.25 points) The price of a house has increased by 12% this last year, taxes excluded. If the price is €90.000

a) What was the original price of the house?

b) Besides, I have to pay 21% of VAT and then pay 7.5% of interest to the bank. What's the final price of the house?

Exercise 3: (1 point) Split €600 in an inversely proportional way to 2, 5 and 6.

Exercise 4: (1.25 points) Twenty workers need to work eight hours a day for nine days to finish a job. How many hours a day would fifteen workers have to work to finish the same job in twenty days?

Exercise 5: (1 point) Quiero estudiar la tasa de mortalidad (en porcentaje) entre los rebaños de ovejas de la sierra. Para ello le he pedido a un pastor que haga un seguimiento de sus animales durante un año y anote cuántos de ellos la han palmado. Digo, han fallecido. Sniff, sniff.
Clasifica la variable aleatoria e indica la población y la muestra. ¿Crees que es significativa? ¿Por qué?

Exercise 6: (2 points) Given the following table showing the values and frequencies of a certain random variable

x_i	0	4	7	10	20
f_i	5	2	3	4	7

Work out:

a) The percentages
b) The range and the standard deviation
c) Do you think that I should repeat the study? Why?

Exercise 7: (2 points) Given the following table showing the values and frequencies of a certain random variable

x_i	[0,3]	(3,6]	(6,9]	(9,12]	(12,15]
f_i	7	4	7	3	6

Work out:

a) Classify the variable
b) The measures of central tendency
c) Pearson's coefficient of variation
d) The frequency polygon