PROPORTION AND STATISTICS TEST
3º ESO

Exercise 1: (1 point) I want to know the most common color of vehicles nowadays, so last Saturday I took a walk around the neighborhood and checked the color of two hundred cars. Indicate the population, the sample, classify the variable and tell me, do you think my study is a representative one?

Exercise 2: (2.25 points) Given the following table showing the values and frequencies of a certain random variable

x_i	1	2	4	5	6
f_i	5	10	6	10	3

Work out:

a) The percentage corresponding to each value of the variable (0.5)
b) The mode (0.25)
c) The measures of dispersion (1.25)
d) Classify the variable (0.25)

Exercise 3: (2 points) Given the following table showing the values and frequencies of a certain random variable

x_i	$[0,4]$	$(4,8]$	$(8,12]$	$(12,16]$
f_i	9	5	7	8

Work out:

a) The median (0.75)
b) Pearson's coefficient of variation (1)
c) Classify the variable (0.25)

Exercise 4: (1 point) Divide €1250 in a directly proportional way to 3, 5 and 8.

Exercise 5: (1.25 points) Divide €2500 in an inversely proportional way to 2, 8 and 9.

Exercise 6: (1.25 points) A Christmas Candles factory with twelve machines needs five days to produce 9000 candles. How many machines would they have to sell/buy if the want to produce 15750 candles in a week?

Exercise 7: (1.25 points) Six people need to work seven hours a day for ten days to replant all the trees in a forest that was burned last summer. If nine people were going to work for eight days, how many hours a day would they have to work? Round the answer to hours, minutes and seconds if needed.