

PROPORTION AND STATISTICS TEST - 3º ESO

Exercise 1: (1.25 points) Fill in the gaps in the following tables and find the values of the constants of proportionality knowing that the magnitudes involved are:

a) Directly proportional

10		4	15		35
	6	5		20	

b) Inversely proportional

	8	12		0.5	
4	6		10		1

Exercise 2: (1.25 points) The price of a house is €230 000.

- If the price of houses has increased by 18% this last year, what was the original price of the house?
- If the original price was €250 000, what would the percentage of variation be?

Exercise 3: (1.25 points) Split €9100 in an inversely proportional way to 2, 5 and 6.

Exercise 4: (1.25 points) A cruiser needs seven days to cover a distance of six hundred and fifty km when traveling eight hours a day. How many hours would the cruiser have to travel each day in order to cover a distance of five hundred and sixteen km in five days?

Exercise 5: (1 point) Quiero hacer un estudio acerca de las horas diarias de uso de Internet y redes sociales entre los adolescentes andaluces. Para ello he escogido a mil alumnos en cada una de las ocho capitales andaluzas. Indica cuáles son la población y la muestra y clasifica la variable aleatoria. ¿Crees que la muestra es significativa?

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

x_i	0	2	4	5	6
f_i	4	8	2	8	5

Work out:

- The measures of central tendency
- Pearson's coefficient of variation
- The bar diagram, the histogram and the frequency polygon

Exercise 7: (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	5	10	7	4

Work out:

- The percentage corresponding to each value of the variable
- The mode
- The measures of dispersion
- The bar diagram, the histogram and the frequency polygon