



PROPORTION AND RATIONAL NUMBERS TEST

2º ESO



Exercise 1: (1.75 ptos) Fill in the gaps in these tables and find the value of the constant of proportion, knowing that they are:

a) Directly proportional

30	18	54		15	
		9	2		0.7

b) Inversely proportional

16	2	6			0.5
		8	4	1.2	

Exercise 2: (1.5 ptos)

- This year there are a 6% more Christmas lights in Córdoba than the previous one. If they installed 1 450 000 lights last year, how many lights do we have now?
- But the needed power has decreased by 10% because they are energy saving bulbs. If this year they need 107460 w, how much did they spend last Christmas?

Exercise 3: (1 pto) Divide 1472€ in a directly proportional way to 2, 5 and 9

Exercise 4: (1.25 ptos) I want to go to the store to buy some food for next week. I need three bricks of milk, 0.85€ each, a bag of bread, 1.15€, one kilo and a half of oranges, 1.80€/kg and two cans of tomato, 0.65€ each. How much money will I have to pay? I only have 7€ ...

Exercise 5: (1.25 ptos) Classify the following decimal numbers and the turn them into fractions:

a) $12.\overline{73} =$

b) $5.0\overline{876} =$

c) $5.24681012\overline{\dots} =$

d) $7.\overline{252525} =$

Exercise 6: (1.5 ptos) Write the following numbers using scientific notation:

a) $742716843000000000 =$

b) $0.000000000009371 =$

c) $2195.56 \cdot 10^{-7} =$

d) $0.00002178 \cdot 10^{-1} =$

Exercise 7: (1.75 ptos)

- I need thirteen skeins of wool to knit four Christmas sweaters. How many skeins would I need for nine sweaters? How many skeins do I have to buy?
- Fifteen people need two hours and a half to remove all the leaves from the branches of a dead tree. How long would twenty people need?

