



## FIRST TERM GLOBAL TEST- 3º ESO



**Exercise 1: (2.5 ptos)** Work out:

a)  $\sqrt[3]{x^2} : \sqrt[5]{x^{-1}} \cdot \sqrt{x^{-3}} =$

b)  $\frac{\sqrt[5]{x^{-4}y^3} \cdot \sqrt{x^{-1}}}{\sqrt[6]{x^5y^{-7}}} =$

c)  $\sqrt[3]{135} - 7\sqrt[3]{320} + 3\sqrt[3]{625} =$

**Exercise 2: (0.75 ptos)** Divide 5376€ in a directly proportional way to 5, 7 and 9

**Exercise 3: (1 pto)** A friend of mine works as a builder and he had to cut a beam with a length of 4.75 m, but his cell phone rang just then, the saw slipped, and now the beam is only 4.50 m long. Find the percent error and tell me if he should go along with the project.

**Exercise 4: (0.75 ptos)** Good times are finally back and Santa has enough gold coins to hire a bunch of elves to help him during this busy season. Last year, with two hundred and fifty-eight elves, they wrapped 731 millions of presents in twenty-eight days. Now they have 850 millions of presents and they want to be done in just twenty-one days. How many elves does he have to hire?

**Exercise 5: (1 pto)** Find these unions and intersections of intervals and **write them as inequalities too**:

a)  $[-7, -2] \cup [-4, 3] =$

b)  $(-1, 4) \cap [0, 1] =$

**Exercise 6: (1.25 ptos)** Work out and express the answers using scientific notation:

a)  $5.42 \cdot 10^{-4} + 1.71 \cdot 10^{-3} - 3.15 \cdot 10^{-2} =$

b)  $(5.42 \cdot 10^{-7}) \cdot (9.14 \cdot 10^{-3}) =$

c)  $(5.42 \cdot 10^{-3}) : (8.59 \cdot 10^{-2}) =$

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

$[0,2]$	$(2,4]$	$(4,6]$	$(6,8]$
12	15	9	7

- Classify the variable
- Find the mode and the median
- Find Pearson's coefficient of variation
- Plot the frequency polygon

**Exercise 8: (0.75 ptos)** Find the selling price of a mix made of half a kilo of gherkins, 2.5€/kg, 400 grams of green olives, 5.5€/kg, and 300 grams of black olives, 6€/kg.

