FIRST TERM GLOBAL TEST - 3º ESO

Exercise 1: (2.25 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	6	2	4

Work out:

a) Classify the variable
b) Work out the measures of central tendency
c) Find Pearson's coefficient of variation
d) Plot the histogram and the frequency polygon

Exercise 2: (1.75 points)

a) Now that Christmas is getting near, all the stores are offering a lot of promotions. I've found a hand warmer that I am planning to buy. The original price was 39.95€ but first it got a 15% discount and now another additional 20% off. What's its final price?
b) A factory that works 12 hours a day can produce 105000 tablets of Turrón de Jijona in 5 days. How many tablets could they produce in a week if they work for 15 hours every day?

Exercise 3: (1.25 points) Work out:

a) $3.84\cdot10^{-3}-4.39\cdot10^{-2}+5.17\cdot10^{-4}=$
b) $\left(4.25\cdot10^{-3}\right):\left(7.29\cdot10^{-7}\right)=$
c) $\left(9.82\cdot10^{-3}\right)\cdot\left(7.32\cdot10^{-7}\right)=$

Exercise 4: (0.75 points) The Guadalquivir River is 657 km long. Find the percentage error if I round it to 650 km.

Exercise 5: (0.75 points) Divide 3040€ in an inversely proportional way to 2, 7 and 9

Exercise 6: (2.25 points) Work out, extract factors and express **as a single root** when possible:

a) $\sqrt[7]{a^{-5}}\cdot\sqrt{a}:\sqrt[5]{a^{-2}}=$
b) $\sqrt{32}-3\sqrt{128}+5\sqrt{162}=$
c) $\dfrac{\sqrt[5]{x^3y^{-7}}\cdot\sqrt[3]{x}}{\sqrt{xy^{-1}}}=$

Exercise 7: (1 point) Work out and **express as inequalities** too:

a) $(-2,0]\cup(-1,7]=$
b) $[-7,4]\cap(-2,4)=$