LINEAR AND QUADRATIC EQUATIONS TEST - 2° ESO

Exercise 1: (2.5 ptos) Solve the following linear equations:

a) $2x-5-9x+2=3x-4x+7-5+6x$ (0.5)

b) $5(3x-2)-4(2x-1)=5x+2(x-3)$ (0.75)

c) $\frac{x-5}{2x+7}=\frac{3}{2}$ (0.5)

d) $\frac{3-x}{5}-\frac{2x-1}{3}=1-\frac{x+1}{2}$ (0.75)

Exercise 2: (1 point) A toy sheep costs five euro less than a toy unicorn. I buy twenty unicorns and thirteen sheep and spend a total of 232€. What's the price of each toy?

Exercise 3: (2.5 points) Solve the following quadratic equations without using the formula:

a) $10x^2-5x=0$

b) $x^2+17x=0$

c) $x^2-81=0$

d) $4x^2-100=0$

e) $25x^2-16=0$

Exercise 4: (2.75 points) Solve the following equations:

a) $x^2+9x+14=0$

b) $x^2-12x+36=0$

c) $x^2-2x-15=0$

d) $2x^2-7x+3=0$

e) $(x-5)^2=2x-2$

Exercise 5: (1.25 points) In a triangle the length of the base is three cm less than the length of the height, and the area is 14cm^2. Work out its dimensions.