SYSTEMS OF EQUATIONS TEST

2º ESO

Exercise 1: (2.75 ptos) Solve and **classify** the following systems using the substitution method:

a) $\left.\begin{array}{l} x+3y=1 \\ 3x-2y=14 \end{array}\right\}$ (1)

b) $\left.\begin{array}{l} 2x+3y=5 \\ 5x-y=-13 \end{array}\right\}$ (1)

c) $\left.\begin{array}{l} 4x+2y=6 \\ 2x+y=7 \end{array}\right\}$ (0.75)

Exercise 2: (1.75 ptos) Solve the following systems of equations using the elimination method:

a) $\left.\begin{array}{l} x-2y=1 \\ 5x+y=27 \end{array}\right\}$ (0.75)

b) $\left.\begin{array}{l} 4x+3y=0 \\ 5x+y=11 \end{array}\right\}$ (1)

Exercise 3: (2.25 ptos) Solve using whatever method you prefer:

a) $\left.\begin{array}{l} 3x+2y=5 \\ 4x+3y=9 \end{array}\right\}$ (1)

b) $\left.\begin{array}{l} 3x-y=1 \\ 4x+5y=2 \end{array}\right\}$ (1.25)

Exercise 4: (1.25 ptos) Solve using the graphical method $\left.\begin{array}{l} 3x+y=1 \\ x-y=7 \end{array}\right\}$

Exercise 5: (1 pto) I've finally bought my farm and I have another way to earn money, and eat. I got two types of different hens too. The white ones place two eggs every day, and the brown ones, three eggs. If I have a total of forty-six animals and this morning I gathered one hundred and nine eggs, how many hens of each type do I have? (I have to forget about this teaching thing and enjoy my new life...)

Exercise 6: (1 pto) I will also need seeds in order to plant some fruits and vegetables. For the hens, and for me. 60 bags of corn seeds and 15 bags of carrot seeds cost 90€, while 20 bags of corn seeds and 30 bags of carrot seeds cost 55€. What's the price of a bag of each product?