

## SIMULTANEOUS EQUATIONS TEST - 2º ESO

### **Exercise 1: (1 point)**

- a) Write a system of equations with solution  $x = -3$  ;  $y = 5$
- b) Add another equation so the system is inconsistent  $\left. \begin{array}{l} 7x - 2y = 1 \end{array} \right\}$

### **Exercise 2: (2.5 points)** Solve these simultaneous equations using the indicated method:

- a)  $\left. \begin{array}{l} 4x + 2y = 34 \\ x + 3y = 1 \end{array} \right\}$  Substitution (0.75)
- b)  $\left. \begin{array}{l} 3x - 2y = 3 \\ 2x + y = 23 \end{array} \right\}$  Elimination (0.75)
- c)  $\left. \begin{array}{l} x + y = 2 \\ 2x + y = 6 \end{array} \right\}$  Graphically (1)

### **Exercise 3: (3 points)** Solve and classify the following systems of equations, using the method you prefer:

- a)  $\left. \begin{array}{l} 5x + 3y = 4 \\ 15x + 9y = 6 \end{array} \right\}$
- b)  $\left. \begin{array}{l} 2x + 3y = -2 \\ 5x + 4y = 9 \end{array} \right\}$
- c)  $\left. \begin{array}{l} 14x - 21y = 7 \\ 2x - 3y = 1 \end{array} \right\}$
- d)  $\left. \begin{array}{l} 4x - 3y = 7 \\ 2x + y = 5 \end{array} \right\}$

**Exercise 4: (1.25 points)** In a warehouse we have four hundred thirty nine stools, some with three legs and some with four legs. I am so bored that I have counted the legs and I got a total of one thousand five hundred and fifty-four legs. How many stools of each type are there?

**Exercise 5: (1.25 points)** Dos números se diferencian en tres unidades. El triple del mayor menos el cuádruple del menor es igual a uno. Calcula los dos números usando un sistema de ecuaciones.

**Exercise 6: (1 point)** La edad de un padre es el triple de la de su hijo, pero dentro de 12 años sólo será el doble. ¿Cuántos años tiene cada uno?