



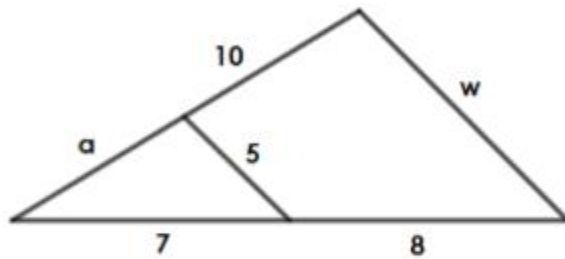
## THIRD TERM GLOBAL TEST

### 2º ESO



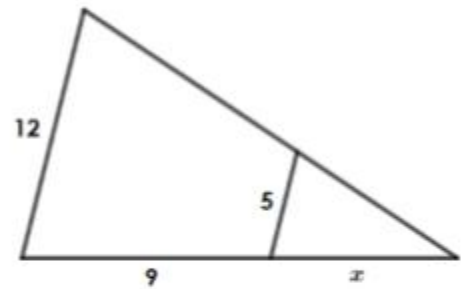
**Exercise 1: (2 points)** Work out the values of the indeterminates:

a)



$$a = 8.75 \quad w = 10.71$$

b)



$$x = 6.43$$

**Exercise 2: (4 points)** Solve the following systems of equations using the indicated method:

Substitution

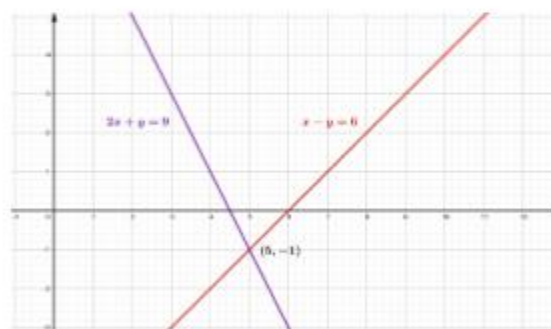
$$\text{a) } \left. \begin{array}{l} 4x - 5y = 3 \\ 2x - y = 9 \end{array} \right\} \rightarrow \begin{array}{l} x = 7 \\ y = 5 \end{array} \quad (1)$$

Elimination

$$\text{b) } \left. \begin{array}{l} 2x - 6y = 10 \\ 3x - 9y = 15 \end{array} \right\} \rightarrow \text{The system has an infinite number of solutions} \quad (0.75)$$

Graphically

$$\text{c) } \left. \begin{array}{l} x - y = 6 \\ 2x + y = 9 \end{array} \right\} \quad (1.25)$$

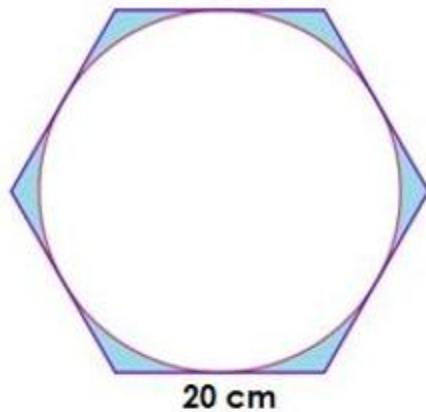


Whatever

$$\text{d) } \left. \begin{array}{l} 3x + 4y = 11 \\ 5x - 3y = -1 \end{array} \right\} \rightarrow \begin{array}{l} x = 1 \\ y = 2 \end{array} \quad (1)$$



**Exercise 3: (1.25 points)** Work out the area of the region between a circle and a regular hexagon if its side measures 20 cm.

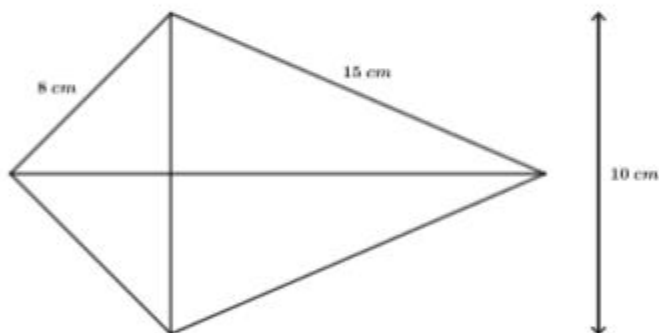


$$A = 96.81 \text{ cm}^2$$

**Exercise 4: (1.5 points)** Find the sides of a right-angled triangle if we know that their lengths are given by  $x-5$ ,  $x+2$  and  $x+3$

The sides of the triangle measure 5 cm, 12 cm and 13 cm

**Exercise 5: (1.25 points)** Find the area of this kite if the sides measure 8 cm and 15 cm and the smallest diagonal measures 10 cm



$$A = 101.93 \text{ cm}^2$$

