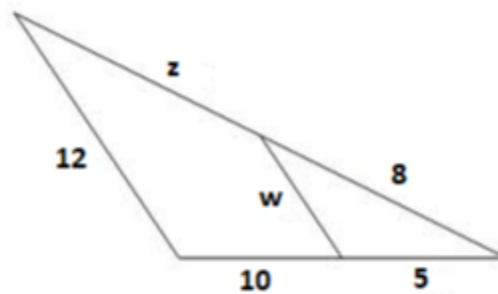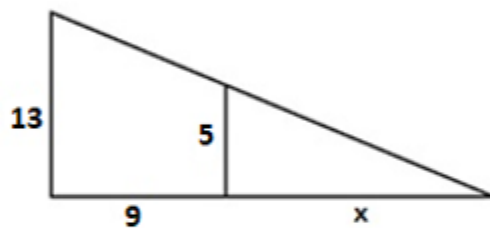# THIRD TERM GLOBAL TEST - 2° ESO

Exercise 1: **(1 point)** Work out the values of **z** and **w** in the following figure:

Exercise 2: **(1 point)** Find the area of a regular nonagon if the radius has a length of 20 cm and the side measures 15 cm

Exercise 3: **(0.75 points)** Find the value of x:

Exercise 4: **(1 point)** Find the sides of a right-angled triangle if they have lengths of x, $x-1$ and $x+1$ cm

Exercise 5: **(3.25 points)** Solve and classify the following simultaneous equations using the indicated method:

a) $\left. \begin{array}{l} 2x-y=16 \\ 3x+5y=11 \end{array} \right\}$ Substitution

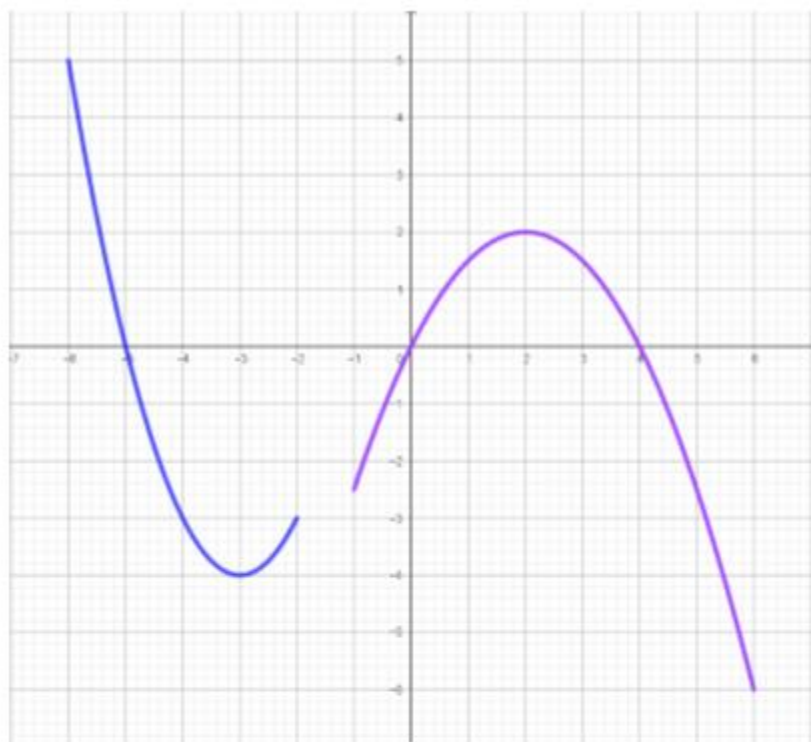b) $\left. \begin{array}{l} x-3y=13 \\ 5x+y=-15 \end{array} \right\}$ Elimination

c) $\left. \begin{array}{l} x+y=-1 \\ 2x-y=10 \end{array} \right\}$ Graphically

d) $\left. \begin{array}{l} 2x+4y=7 \\ 3x+6y=5 \end{array} \right\}$ Whatever

Exercise 6: (1.5 points) Given the following graph of a certain function:

a) Indicate its domain and its image
b) Determine the points where the function crosses the axes
c) Study its monotony
d) Study the relative and absolute extrema

Exercise 7: (1.5 points) Plot the graphs of the following functions:

a) $y = \dfrac{x-1}{2}$

b) $y = 7 - 3x$

c) $y = x^2 - 2x + 1$