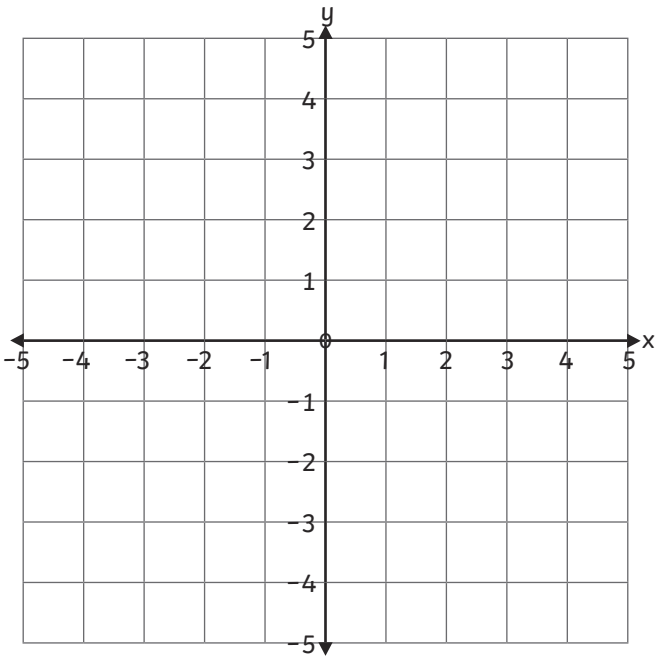


1) a) Here are the coordinates of three vertices of a parallelogram where the secret agent found evidence. Plot these on the grid. Remember to label each vertex.

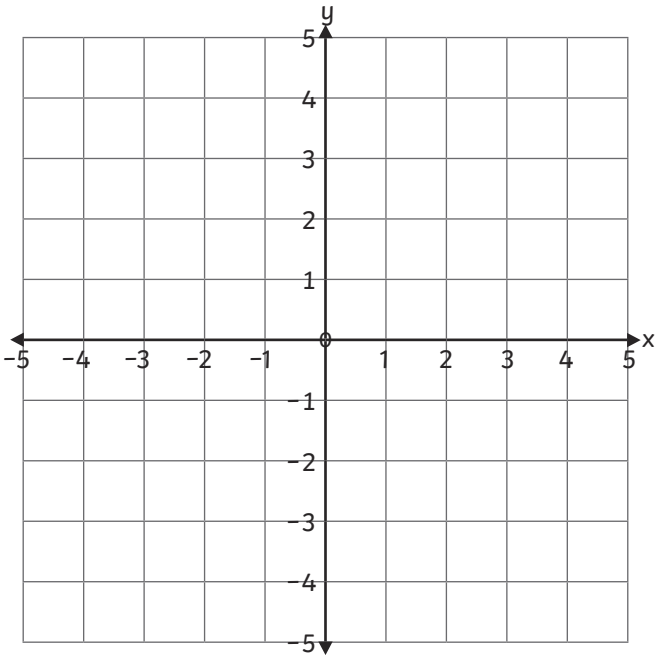
Vertex **A**: (-1,2)

Vertex **B**: (-3,-2)

Vertex **C**: (2,-2)

b) Now plot vertex D, labelling its coordinates on the grid.

c) Complete the drawing of the parallelogram to show where the evidence was found.



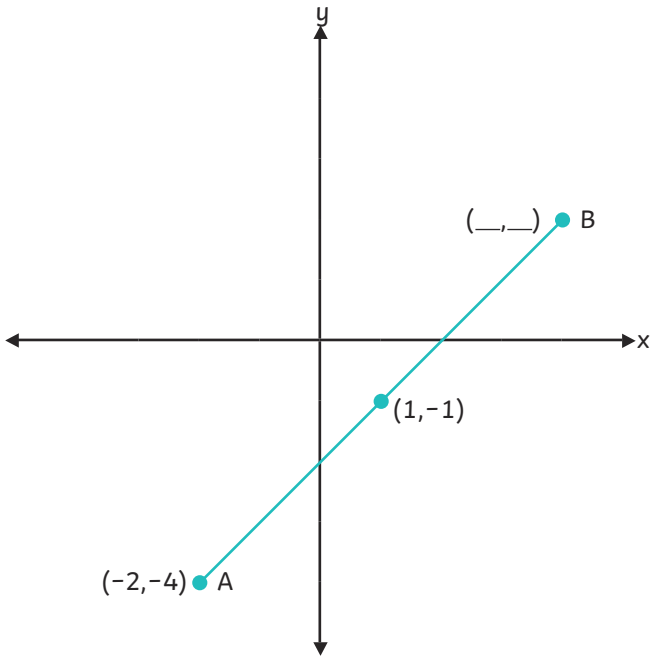
2) The secret agent needs to draw two congruent isosceles triangles on this grid for surveillance.

Here are some of the coordinates of the vertices of both triangles.

(-1,4) (1,4) (5,4) (-3,-4)

a) Plot the above coordinates on the grid.

b) Use these coordinates to help you plot the missing vertices of each isosceles triangle. Then, draw each triangle on the grid so that the secret agent can complete her route.

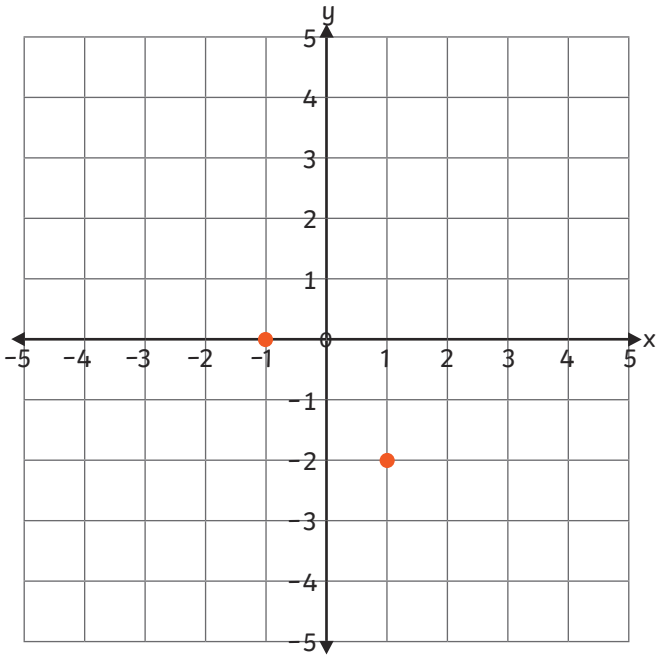


1) Alfie, the secret agent, is solving this problem to establish where fingerprint B was found.

If the coordinates (1,-1) are the midpoint between A and B, what are the coordinates of B?

In order to find the coordinates of point B, I will just need to double the coordinates of A. I think the coordinates of B must be (-4,-8).

Is Alfie correct?
Explain your reasoning.

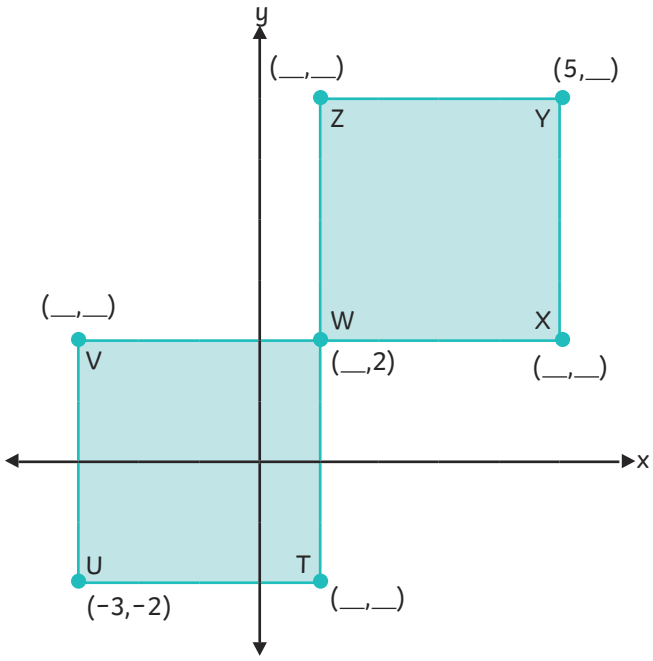


2) Halim, the secret agent, is plotting the missing vertices to complete this square of where clues were found.

He thinks he needs to plot the coordinates (-2,-3) and (-4,-1) but his partner Olivia thinks he needs to use (-3,-2) and (-1,-4).

a) Explain which secret agent is correct.

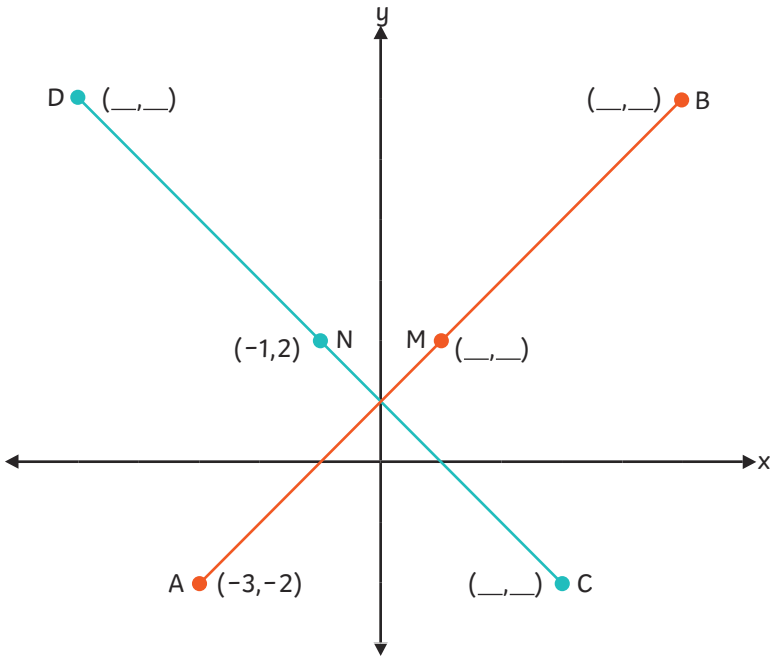
b) Complete the drawing of the square for the detectives.



1) The secret agent needs to describe these hidden locations to his team.

He has drawn two congruent squares on this four-quadrant coordinate grid.

Identify the missing coordinates.



2) Lines AB and CD are congruent.

M and N are the midpoints of each line, where important fingerprints were found.

Use the information on the coordinate grid to find the missing coordinates to show where the fingerprints were detected.