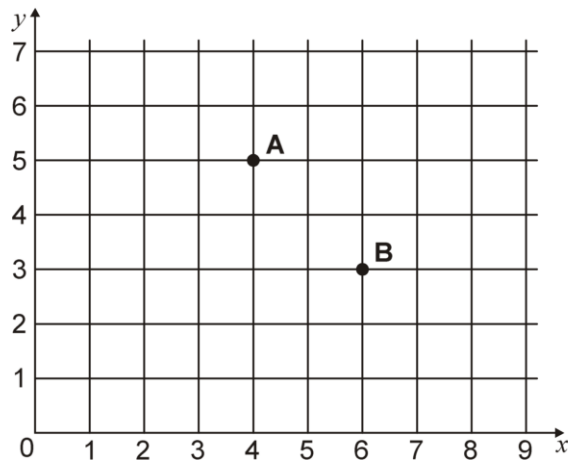


Year 5 Problems Summer 1 Week 3

Objective: Plot points on a coordinate grid in the first quadrant.

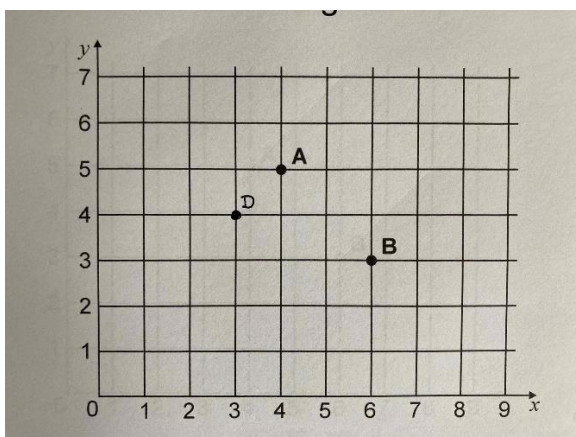
A, B, C and D are the vertices of a rectangle.
A and B are shown on the grid.



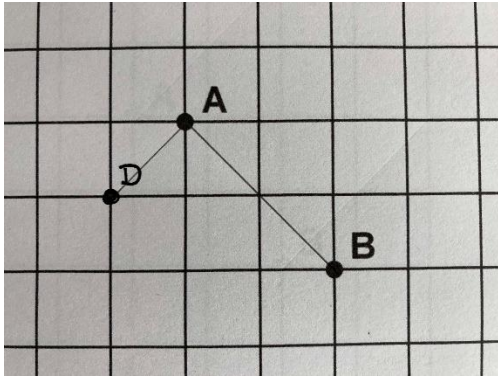
D is the point (3, 4). Write the coordinates of point C.

Model answer

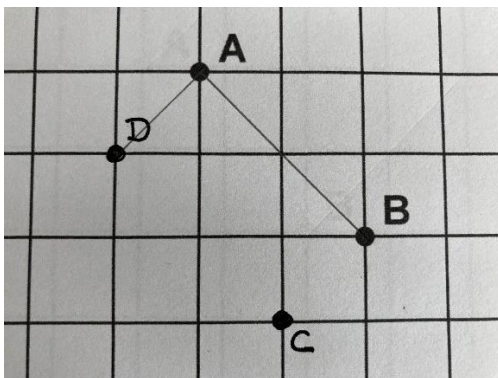
I will start by finding point D on the grid. I know that I must find 3 on the X axis first and then 4 on the Y axis (coordinates are always read starting with X and then finishing with the Y). D is at the point where these lines intersect. I need to mark point and label it with the letter D.



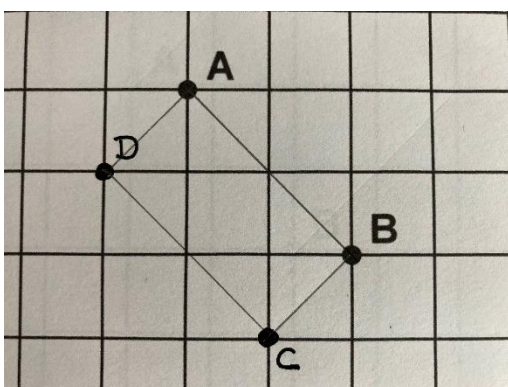
As I know A, B, C and D are the vertices of a rectangle it could help me to join the lines DA and AB. This could help me see the rectangle more easily.



I know that pairs of sides in a rectangle are parallel. That means that side DA must be parallel to side CB. It also means line AB must be parallel to side DB. I think I can now see where point C is.

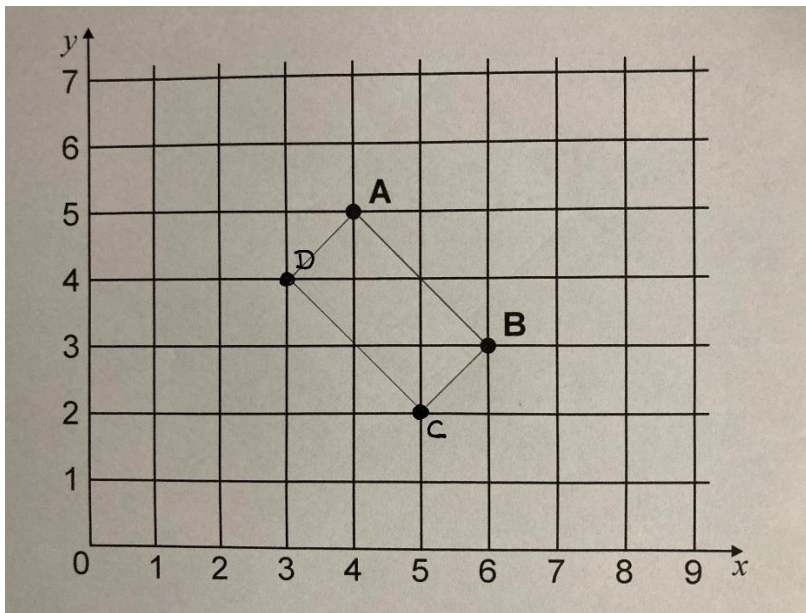


I can check this by joining lines DC and CB.



I can see that lines AD and BC are parallel to each other. I can see that lines AB and DC are parallel to each other. A rectangle also has four right angles. I can see that this rectangle has four right angles (one at each vertex).

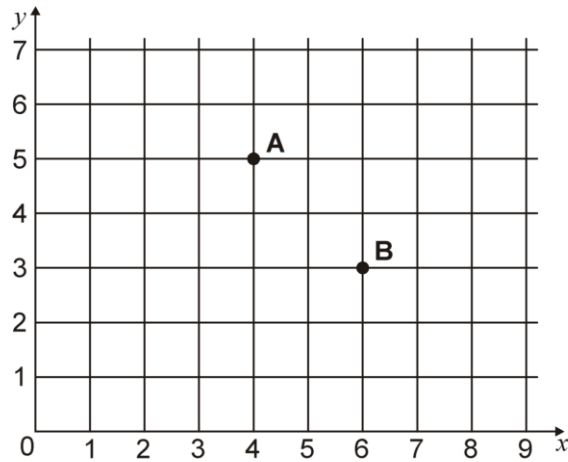
I must check the coordinates for point C. This is 5 on the X axis and 2 on the Y axis.



The answer to the problem is the coordinates for point C are (5, 2).

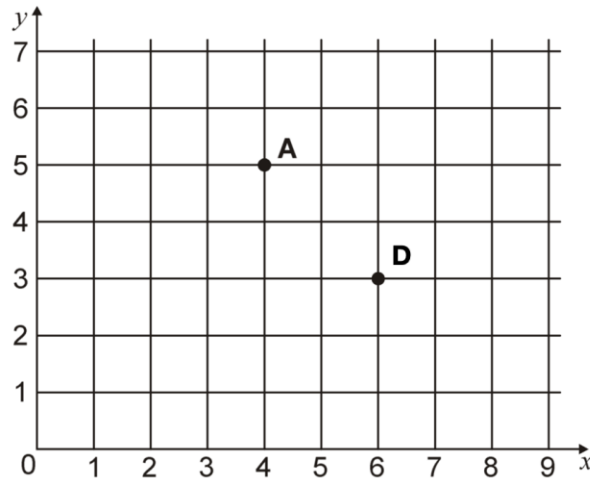
Now try these problems.

A, B, C and D are the vertices of a rectangle.
A and B are shown on the grid.



D is the point (2, 3). Write the coordinates of point C.

A, B, C and D are the vertices of a rectangle.
A and D are shown on the grid.



B is the point (6, 7). Write the coordinates of point C.

Answers:

The coordinates for point C are (4, 1).

The coordinates for point C are (8, 5).