

SCORE

Geometry

With Classified
answer book

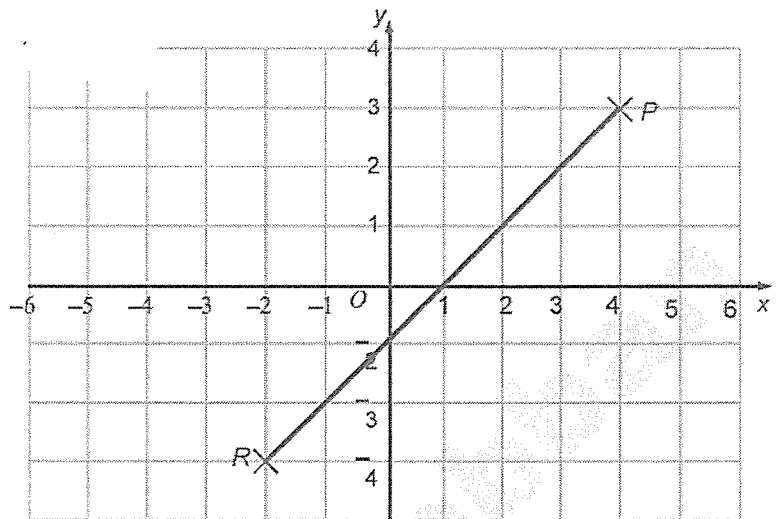
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10- Points on a line segment

1.

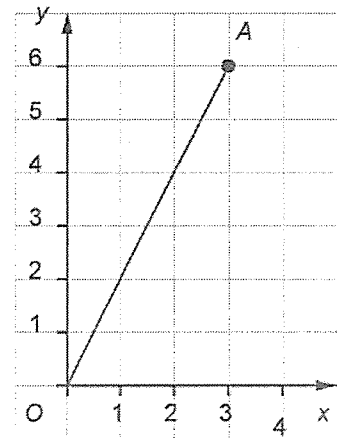


- (a) On the grid, mark the point $(-3, 1)$ with a cross (\times).
- (b) On the grid, mark the point $(-3, -1)$ with a cross (\times). Label the point Q.

2. The diagram shows the points O (0, 0) and A (3, 6).
find the coordinates of the points that lie

a $\frac{1}{3}$ of the way along OA

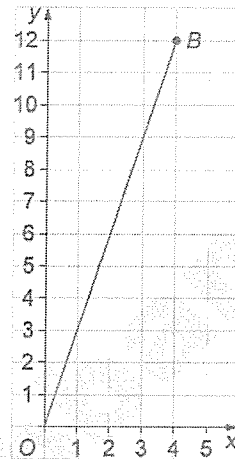
b $\frac{2}{3}$ of the way along OA.



3. The diagram shows the points O (0, 0) and B (4, 12).
find the coordinates of the points that lie

a $\frac{1}{4}$ of the way along OB

b $\frac{3}{4}$ of the way along OB.



4. O is the point (0, 0) and A is the point (5, 8). Points A and B are equally spaced along the same line such that the distance OA is equal to the distance AB.

a What are the coordinates of point B?

(.....,)

b C is the next point along the same line such that distance BC is equal to distances OA and AB. What are the coordinates of point C?

(.....,)

5. O is the point (0, 0) and J is the point (42, 54). Points E, F, G, H and I are equally spaced along the line OJ.
Work out the coordinates of H.

(.....,)

6. C is the point (4, 1) and D is the point (10, 13).

E is the point that lies $\frac{1}{3}$ of the way along CD. Work out the coordinates of E.

(.....,))

7. F is the point (2, 3) and G is the point (7, 18). H is the point that

lies $\frac{2}{5}$ of the way along FG.

Work out the coordinates of H.

(.....,))

8. O is the point (0, 0) and A is the point (8, 10). A lies $\frac{2}{3}$ of the way along the line segment OB.

a Is Dor's correct? Justify your answer.

I think that B is the point (12, 15).

Dor's

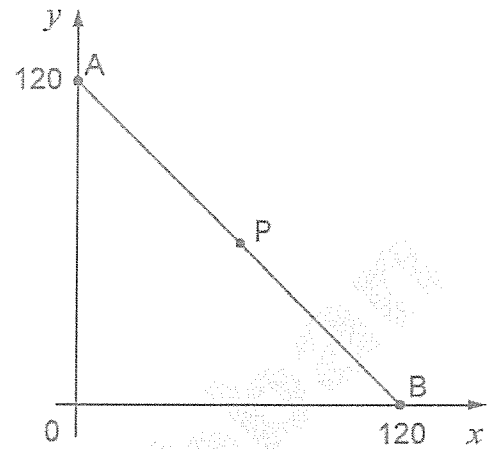
Hana

I think that the ratio of the length of OA : AB is 3 : 2.

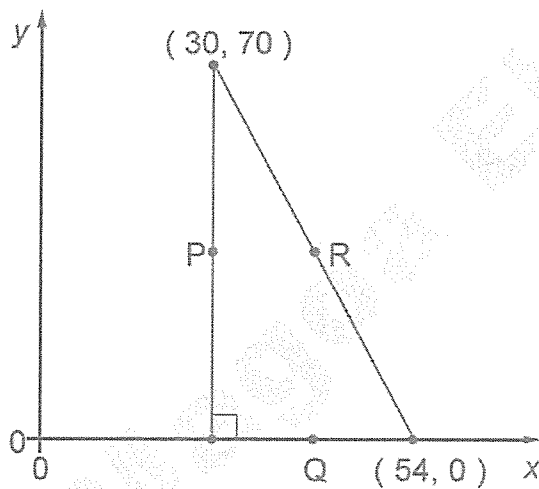
b Is Hana correct? Justify your answer.

9. P is at half distance of line AB.
What are the coordinates of point P?

P is (..... ,)



10. The diagram shows a right-angled triangle.



Not drawn accurately

P, Q and R are the half way of the sides of the triangle. Work out the coordinates of P, Q and R.

P is (_____ , _____)

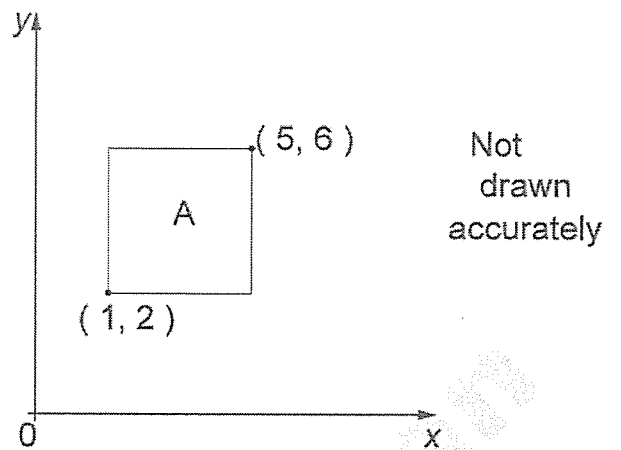
Q is (_____ , _____)

R is (_____ , _____)

11. Look at the square drawn on the graph.

Point A is the centre of the square.

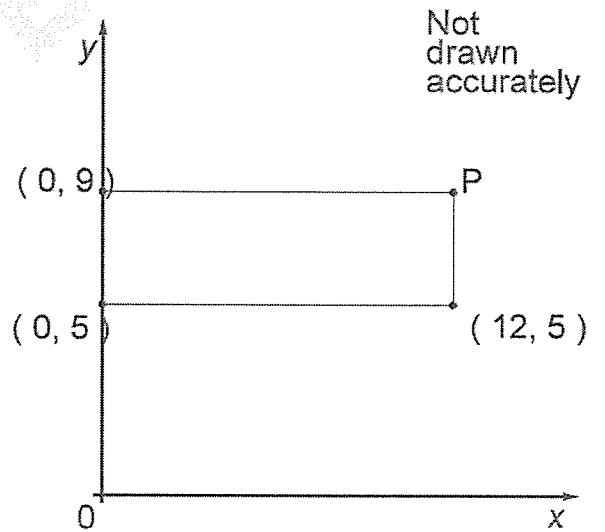
What are the coordinates of point A?



A is (_____ , _____)

12. The graph shows a rectangle.

Write the coordinates of point P



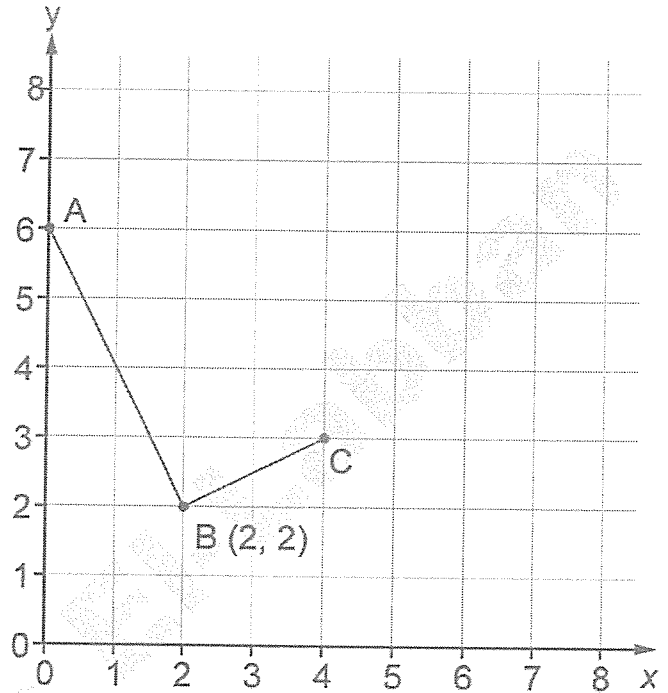
(_____ , _____)

13. (a) Look at the graph.

Write down the coordinates of points A and C.

A is (_____, _____)

C is (_____, _____)



(b) Point D can be marked so that ABCD is a rectangle.

Mark point D accurately on the graph.