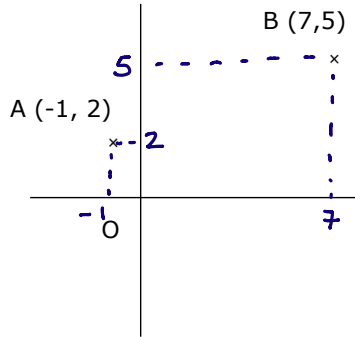


How to ...

Diagram NOT accurately drawn



A is the point $(-1, 2)$

B is the point $(7, 5)$

Yes! you can have coordinates that are not whole numbers 😊

(a) Find the coordinates of the midpoint of AB.

The x coordinate of the midpoint will be halfway between -1 and $7 = (-1 + 7) \div 2 = 6 \div 2 = 3$
 y coordinate $= (2 + 5) \div 2 = 3.5$
 $(3, 3.5)$

P is the point $(-4, 4)$

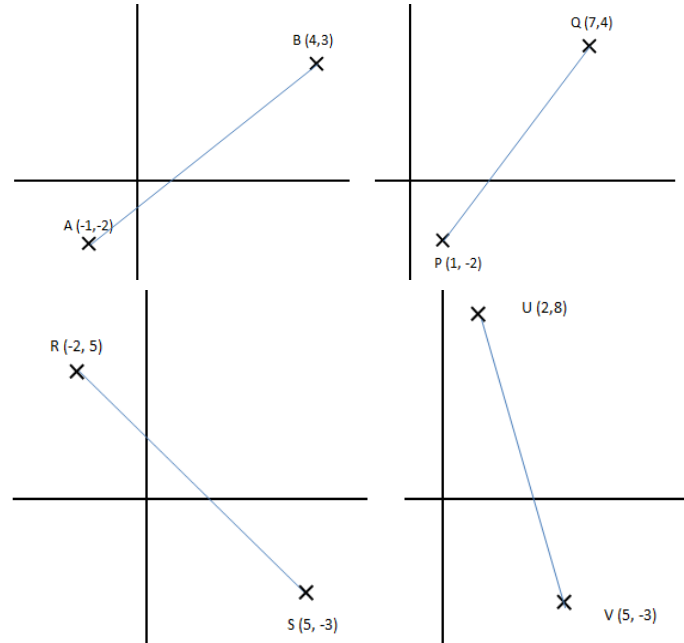
Q is the point $(1, -5)$

(b) Find the gradient of PQ

gradient = $\frac{\text{change in } y}{\text{change in } x} = \frac{-5 - 4}{1 - -4} = \frac{-9}{5} = -1.8$
 use your calculator! (4)

Now have a go yourself ...

1) Work out the coordinates of the midpoint of each line



2) Work out the midpoint between each pair of coordinates:

(i) $(-1, -1)$ and $(9, 9)$

(ii) $(2, -4)$ and $(-6, 9)$

(iii) $(1, 7)$ and $(-7, 2)$

(iv) $(-2, -6)$ and $(7, 3)$

3) P is the point $(1, 10)$ and Q is the point $(2, 40)$. Find the gradient of the line PQ.

4) A is the point $(-4, 6)$ and B is the point $(8, 0)$. Find the gradient of the line AB.

Exam Questions

1) The three points A, B and C are joined to form a triangle. A is (2, 1), B is (14, -2) and C is (3, 7). Work out the coordinates of:

i) side AC

ii) side AB

(4)

2) P is the point with coordinates (2, 3) and Q is the point with coordinates (12, 7). Work out the coordinates of the midpoint of the line PQ

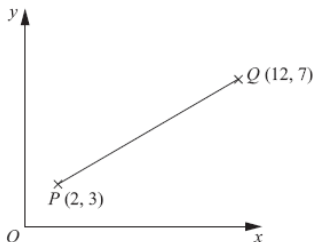


Diagram NOT
accurately drawn

(2)

Ready to be marked ?

Checklist



Answer checked



Working out shown

Keywords



Things to remember ...



What went well ...



Teacher comment ..