



# EXAM PAPERS PRACTICE

GCSE OCR Math J560

Coordinates

Question Paper

*"We will help you to  
achieve A Star "*



**Question 1**

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

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

(b) Find the gradient of  $PQ$ .

[2 marks]

**Question 2**

The point  $A$  has coordinates  $(2, 3)$ .

The point  $B$  has coordinates  $(6, 8)$ .

$M$  is the midpoint of the line  $AB$ .

Find the coordinates of  $M$ .

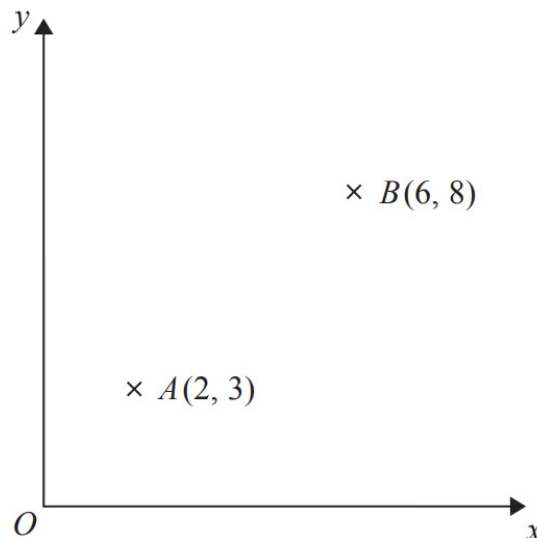
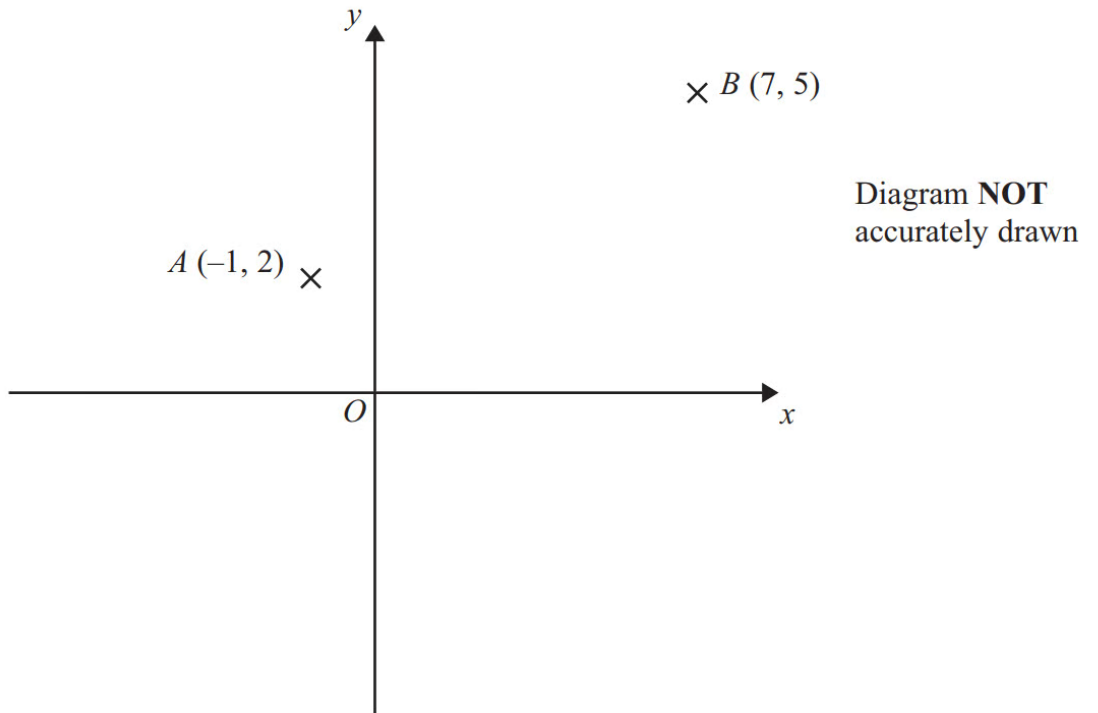


Diagram **NOT**  
accurately drawn

[2 marks]



**Question 3**



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

$B$  is the point  $(7, 5)$

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

**[2 marks]**



**Question 4**

$AB$  is a line segment.

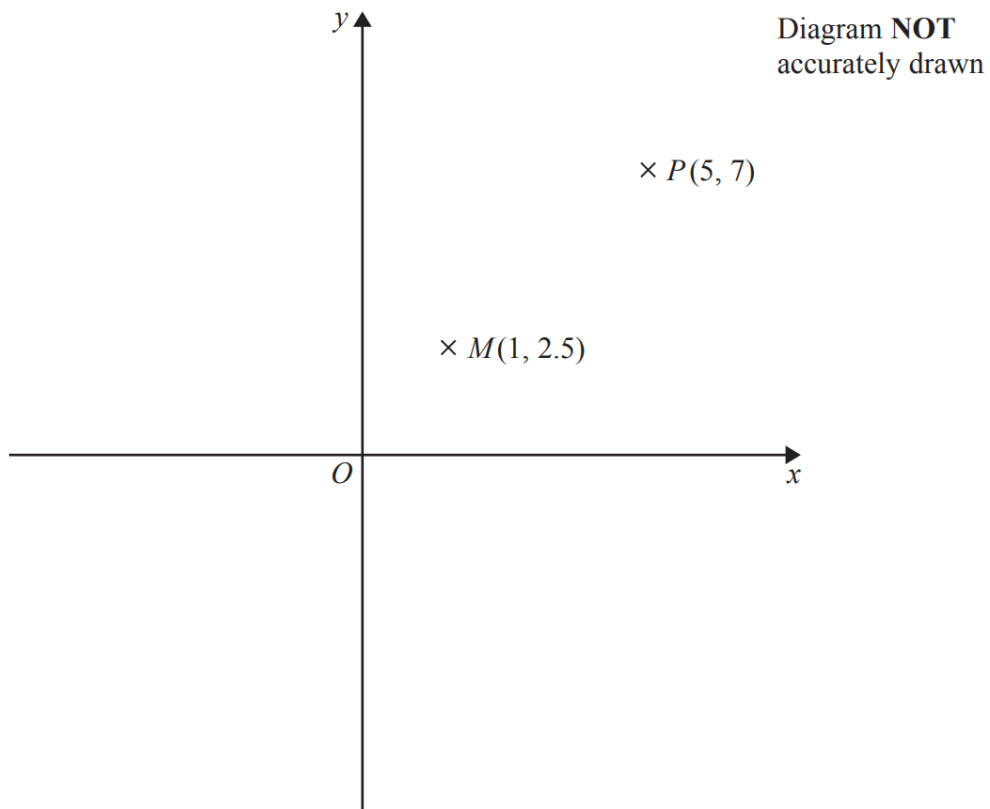
$A$  is the point with coordinates  $(3, 6, 7)$ .

The midpoint of  $AB$  has coordinates  $(-2, 2, 5)$ .

Find the coordinates of  $B$ .

[2 marks]

**Question 5**



Point  $P$  has coordinates  $(5, 7)$ .

Point  $M$  has coordinates  $(1, 2.5)$ .

Point  $M$  is the midpoint of the line  $PQ$ .

Find the coordinates of point  $Q$ .

(....., .....) )

[2 marks]



**Question 6**

$A$  and  $B$  are two points.

Point  $A$  has coordinates  $(-2, 4)$ .

Point  $B$  has coordinates  $(8, 9)$ .

$C$  is the midpoint of the line segment  $AB$ .

(a) Find the coordinates of  $C$ .

[2 marks]

**Question 7**

The points  $A$ ,  $B$  and  $C$  lie in order on a straight line.

The coordinates of  $A$  are  $(2, 5)$

The coordinates of  $B$  are  $(4, p)$

The coordinates of  $C$  are  $(q, 17)$

Given that  $AC = 4AB$ , find the values of  $p$  and  $q$ .

[3 marks]

**Question 8**

A triangle has vertices  $P$ ,  $Q$  and  $R$ .

The coordinates of  $P$  are  $(-3, -6)$

The coordinates of  $Q$  are  $(1, 4)$

The coordinates of  $R$  are  $(5, -2)$

$M$  is the midpoint of  $PQ$ .

$N$  is the midpoint of  $QR$ .

Prove that  $MN$  is parallel to  $PR$ .

You must show each stage of your working.

[4 marks]



**Question 9**

Here is a cuboid drawn on a 3-D grid.

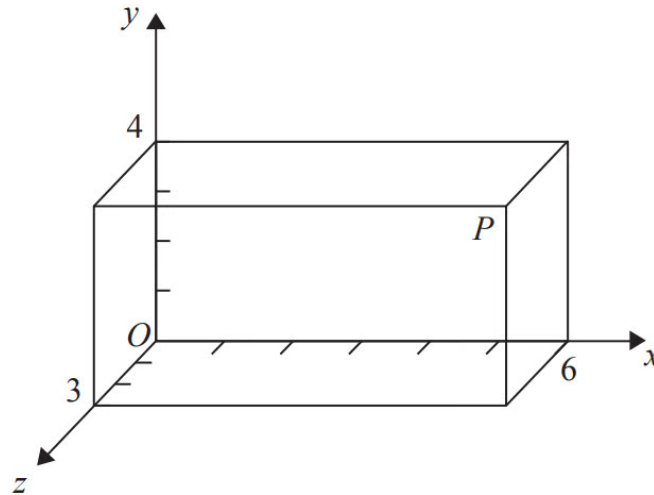


Diagram **NOT** accurately drawn

$P$  is a vertex of the cuboid.

$T$  divides the line  $OP$  in the ratio  $1:2$

Find the coordinates of  $T$ .

[2 marks]

**Question 10**

$D$  is the point with coordinates  $(100, 56)$ .

\***(b)** Does point  $D$  lie on the straight line that passes through  $A$  and  $B$ ?  
You must show how you work out your answer.

[3 marks]



### Question 11

$Q$ ,  $R$  and  $S$  are points on a grid.

$Q$  is the point with coordinates  $(106, 103)$

$R$  is the point with coordinates  $(106, 105)$

$S$  is the point with coordinates  $(104, 105.5)$

$P$  and  $A$  are two other points on the grid such that

$R$  is the midpoint of  $PQ$

$S$  is the midpoint of  $PA$

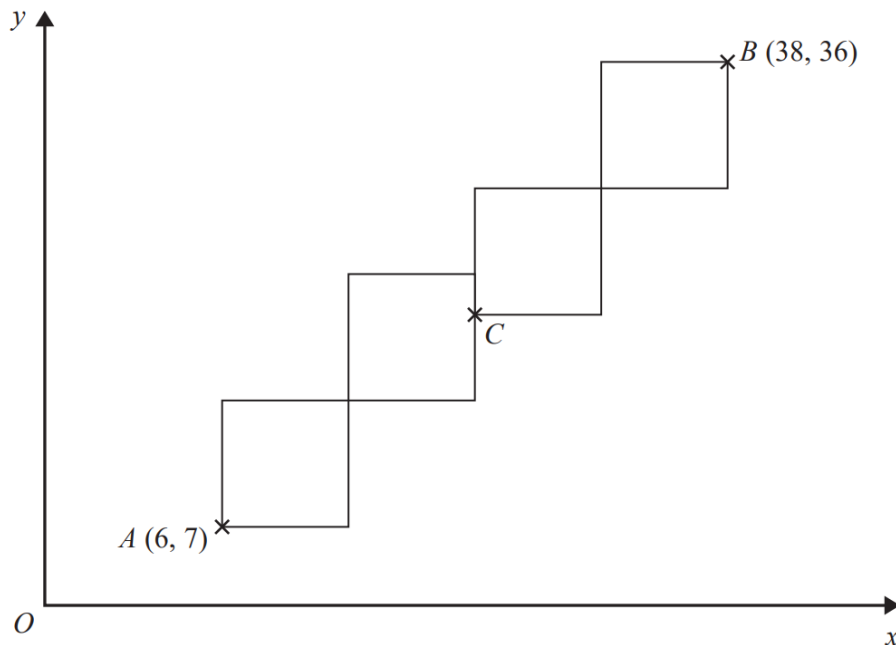
Work out the coordinates of the point  $A$ .

[3 marks]

### Question 12

A pattern is made from four identical squares.

The sides of the squares are parallel to the axes.



Point  $A$  has coordinates  $(6, 7)$

Point  $B$  has coordinates  $(38, 36)$

Point  $C$  is marked on the diagram.

Work out the coordinates of  $C$ .

[5 marks]