



# SUMMIT EDUCATION

**Mathematics**

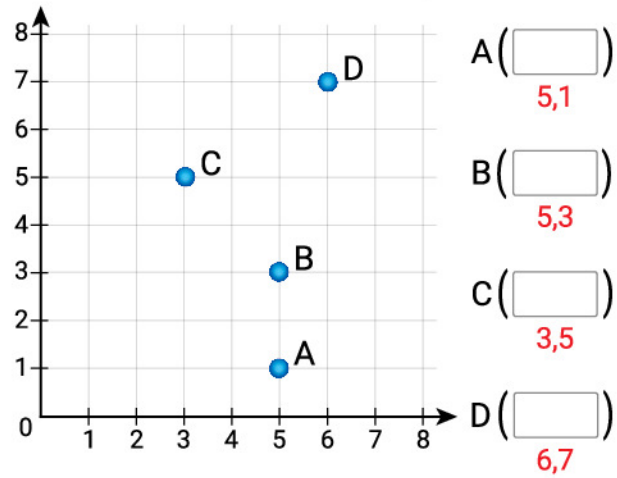
**Worksheet**

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# Maths-Year6-2

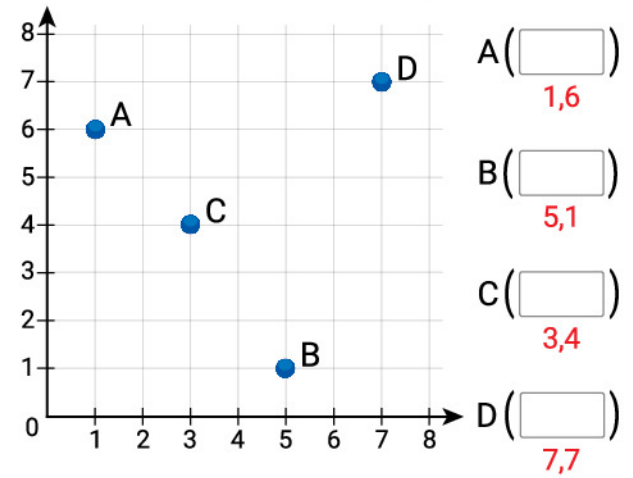
## Q1

Write the coordinates of the points shown.



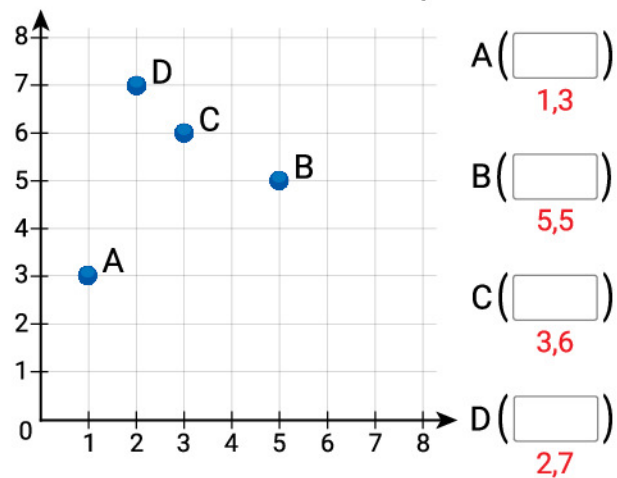
## Q3

Write the coordinates of the points shown.

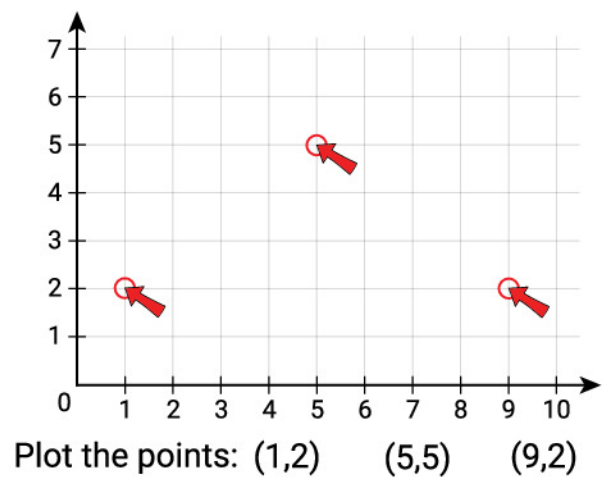


## Q2

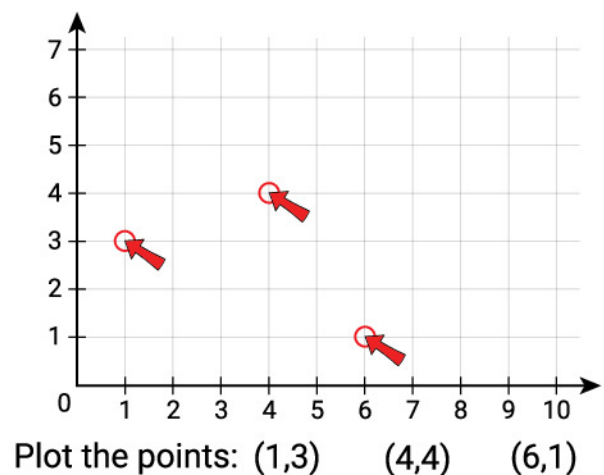
Write the coordinates of the points shown.



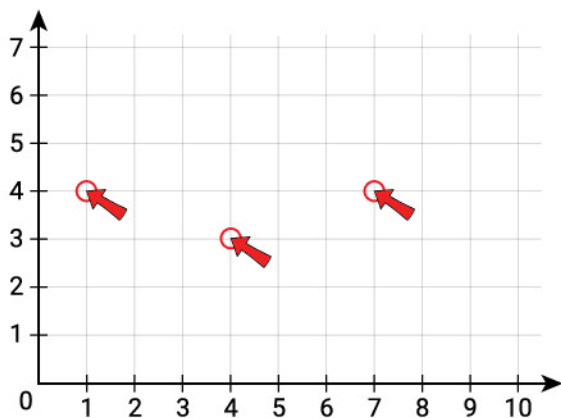
## Q4



## Q5

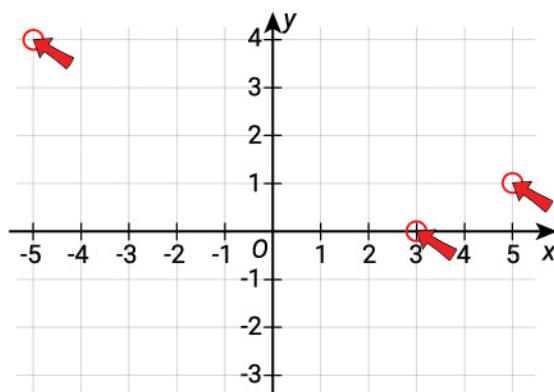


**Q6**



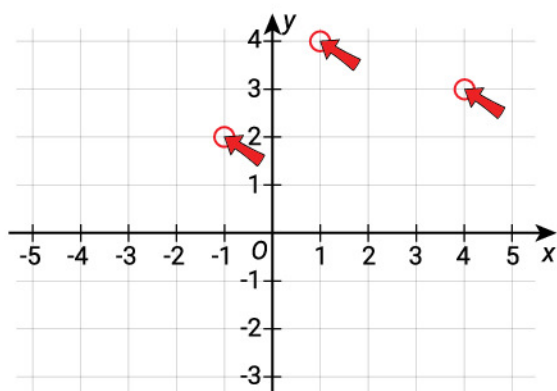
Plot the points: (1,4) (4,3) (7,4)

**Q9**



Plot the points: (5,1) (3,0) (-5,4)

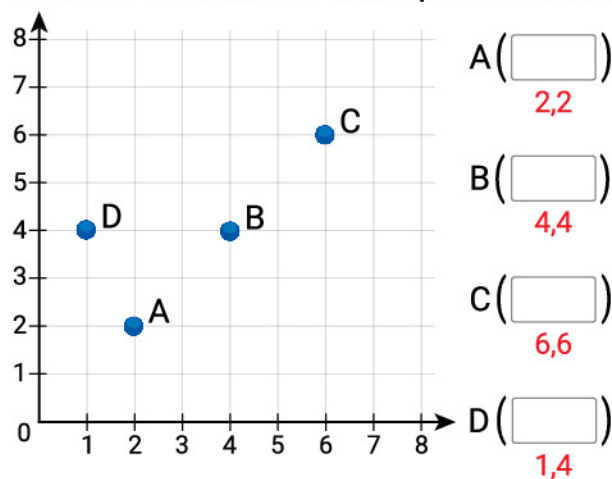
**Q7**



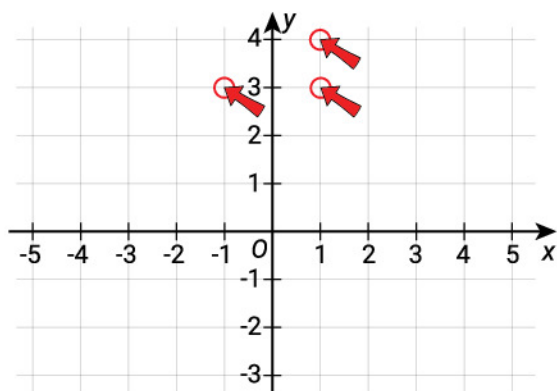
Plot the points: (1,4) (4,3) (-1,2)

**Q10**

Write the coordinates of the points shown.



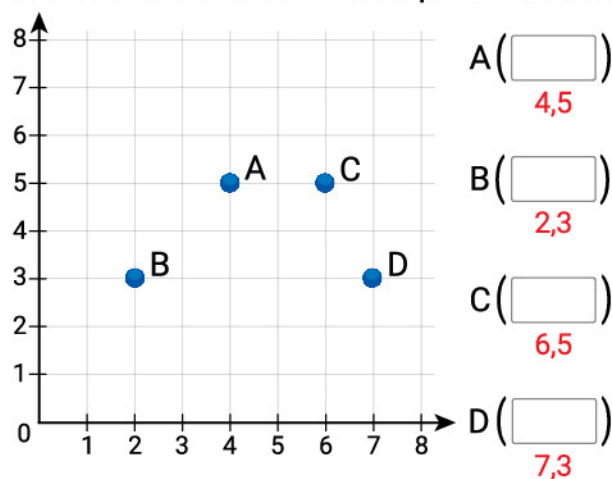
**Q8**



Plot the points: (1,4) (1,3) (-1,3)

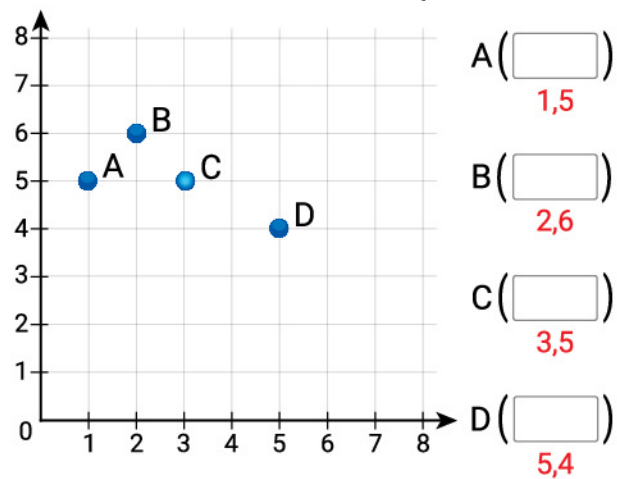
**Q11**

Write the coordinates of the points shown.



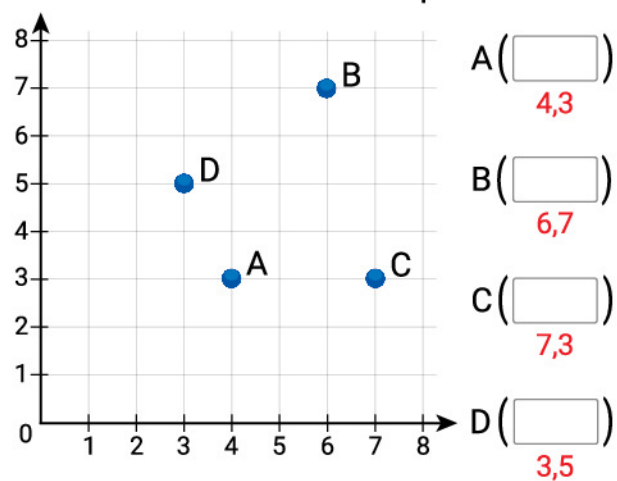
### Q12

Write the coordinates of the points shown.

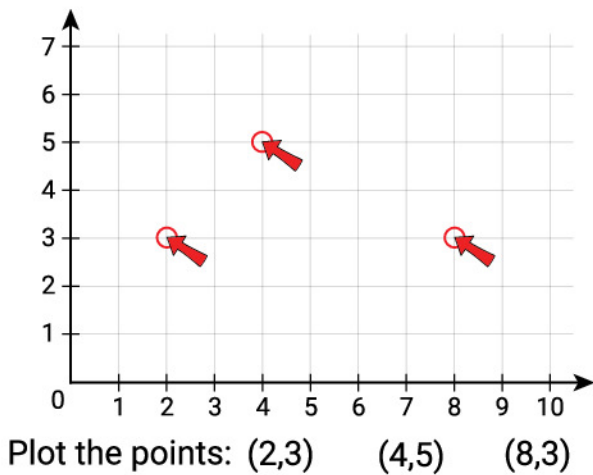


### Q13

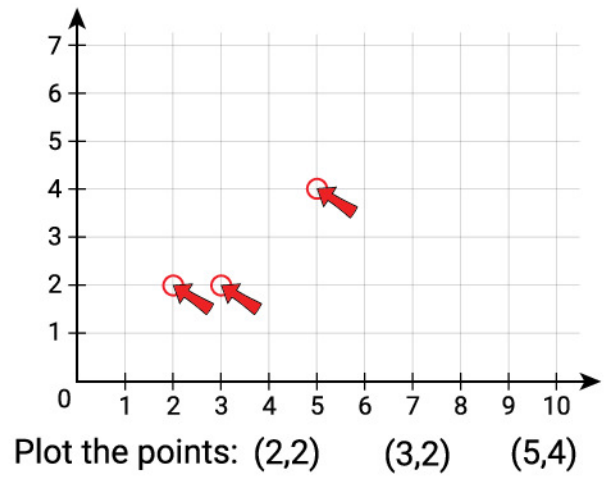
Write the coordinates of the points shown.



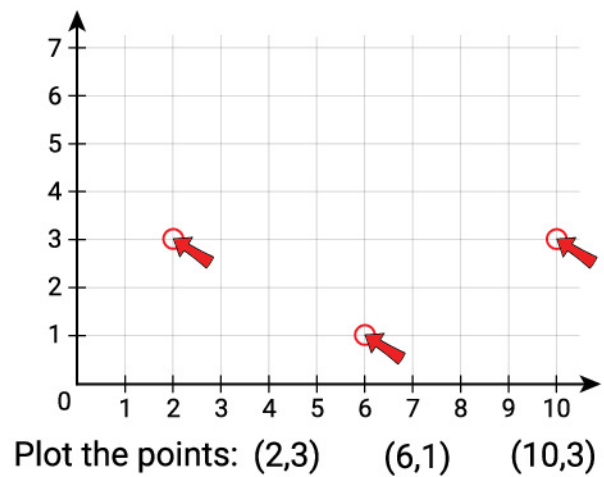
### Q14



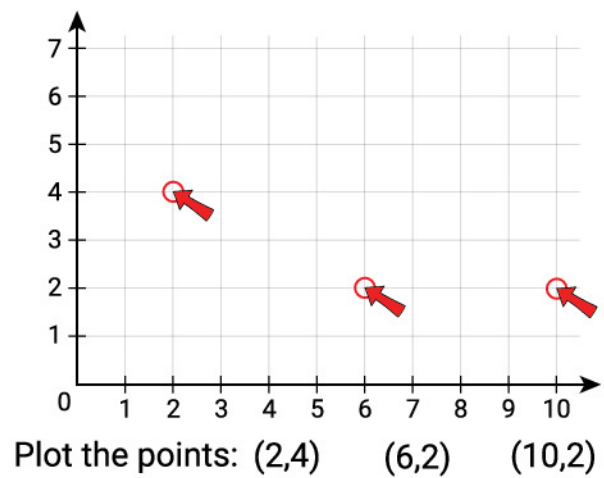
### Q15

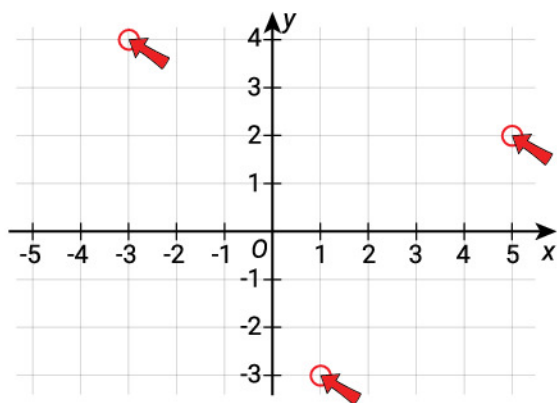


### Q16

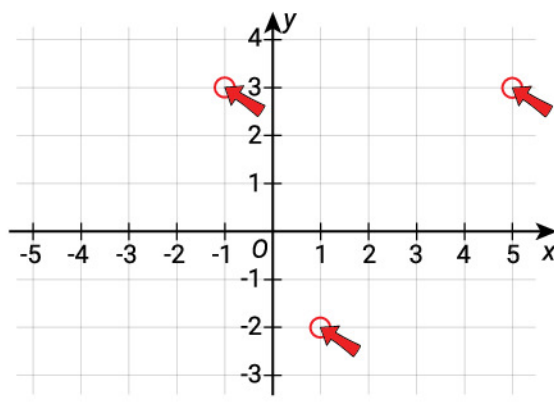


### Q17

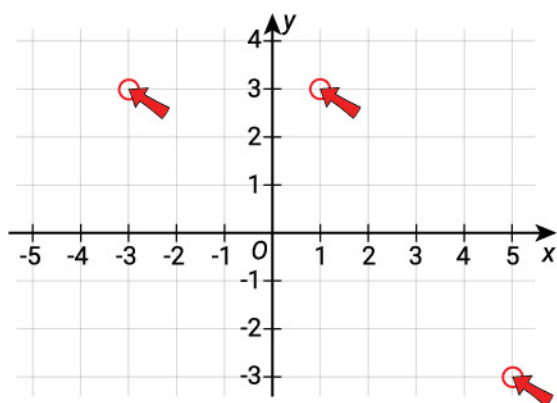


**Q18**

Plot the points: (5,2) (1,-3) (-3,4)

**Q21**

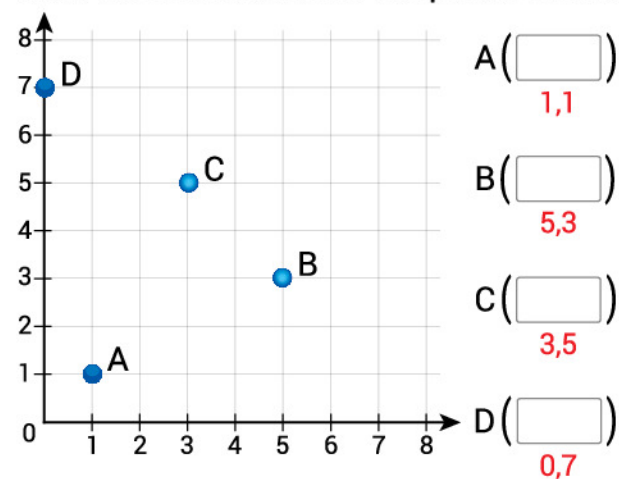
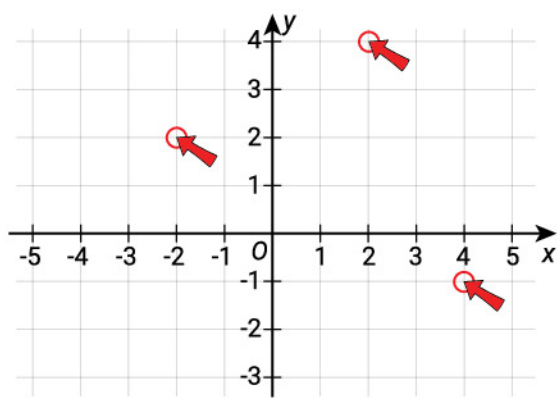
Plot the points: (5,3) (1,-2) (-1,3)

**Q19**

Plot the points: (1,3) (5,-3) (-3,3)

**Q22**

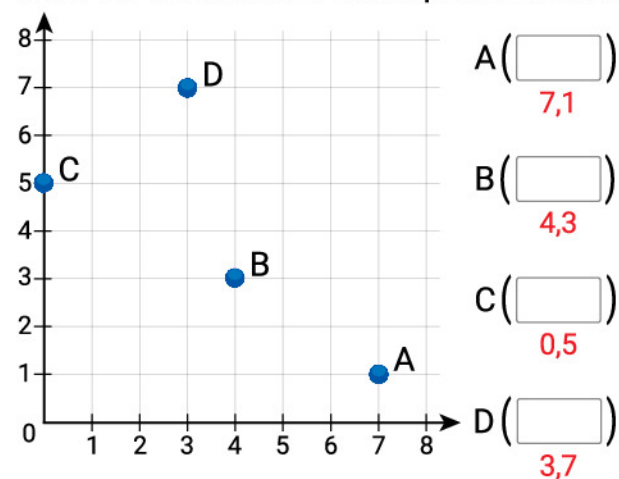
Write the coordinates of the points shown.

**Q20**

Plot the points: (2,4) (4,-1) (-2,2)

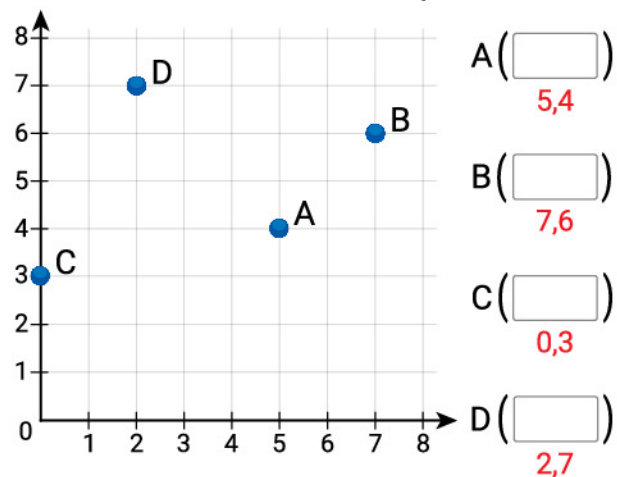
**Q23**

Write the coordinates of the points shown.

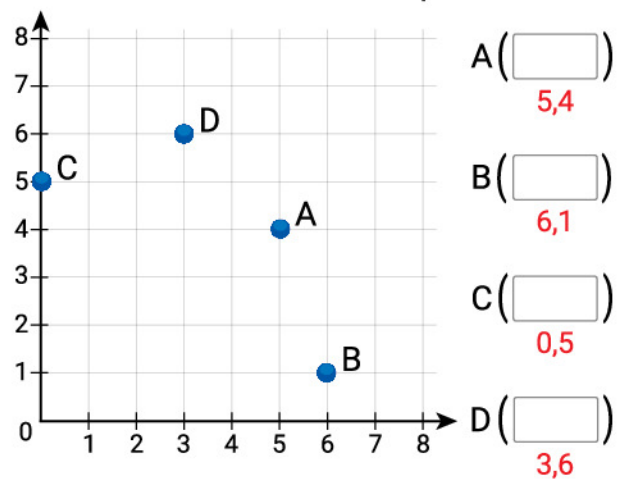
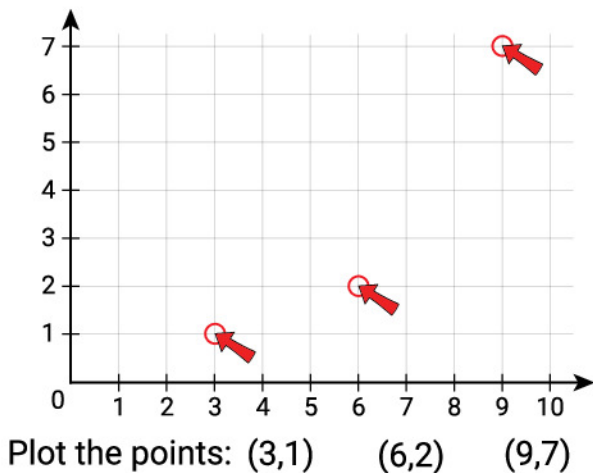
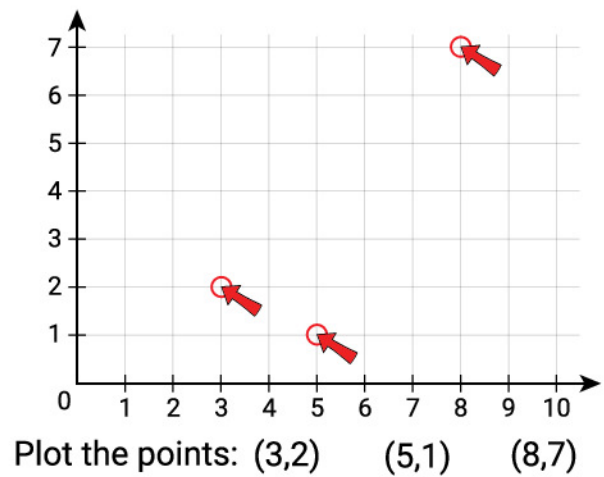
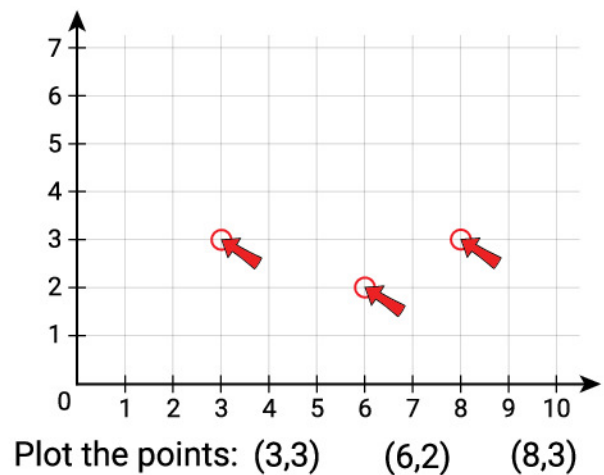
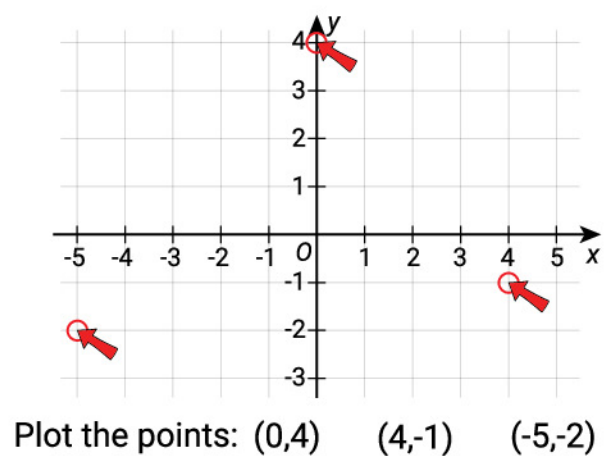


**Q24**

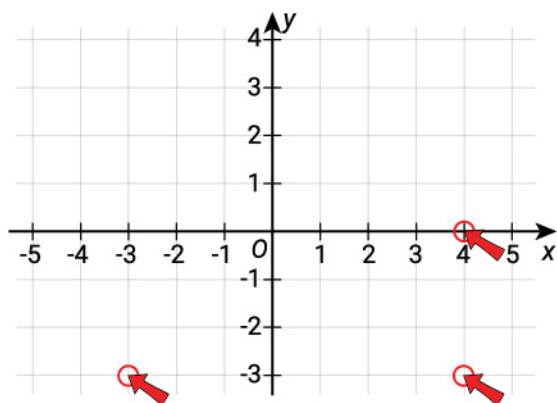
Write the coordinates of the points shown.

**Q25**

Write the coordinates of the points shown.

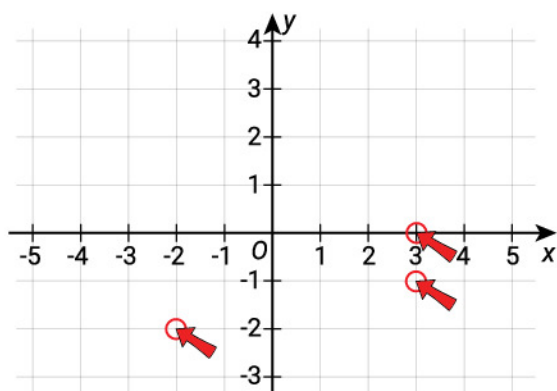
**Q26****Q27****Q28****Q29**

### Q30



Plot the points: (4,0) (4,-3) (-3,-3)

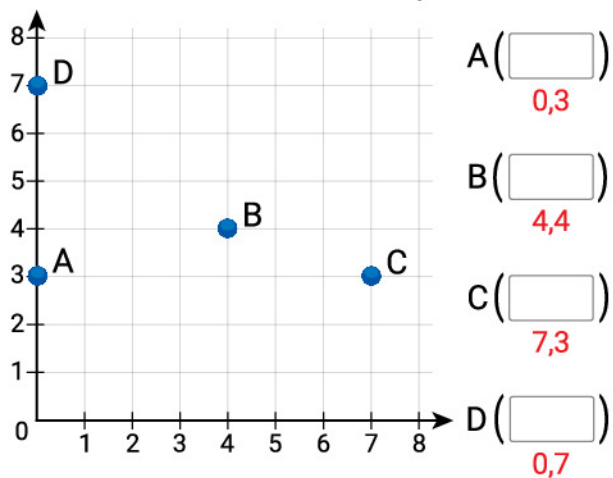
### Q31



Plot the points: (3,0) (3,-1) (-2,-2)

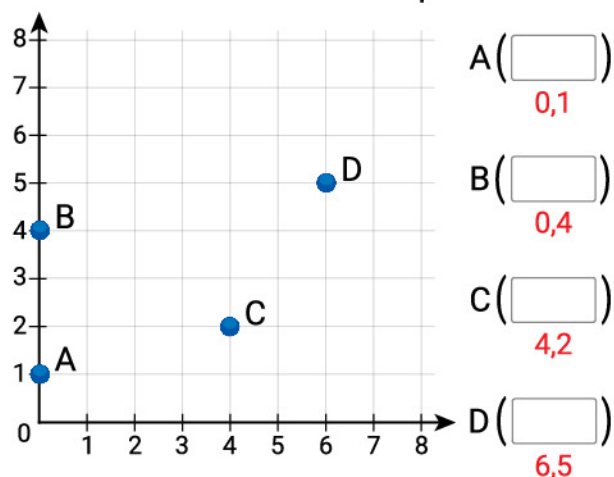
### Q32

Write the coordinates of the points shown.



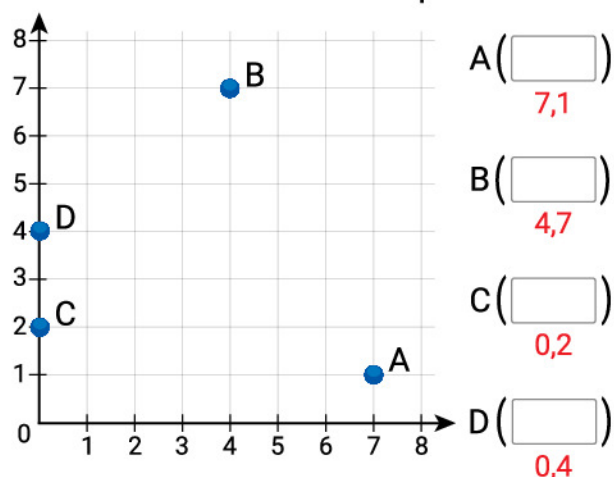
### Q33

Write the coordinates of the points shown.

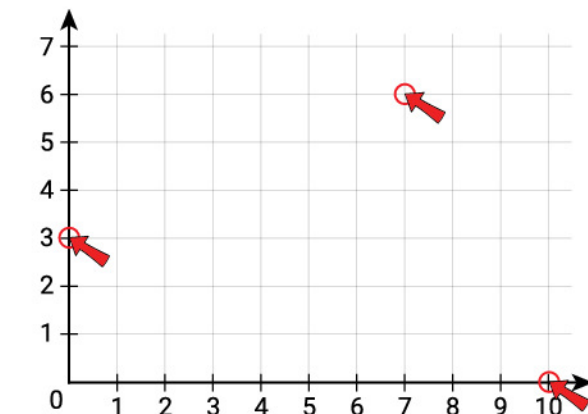


### Q34

Write the coordinates of the points shown.

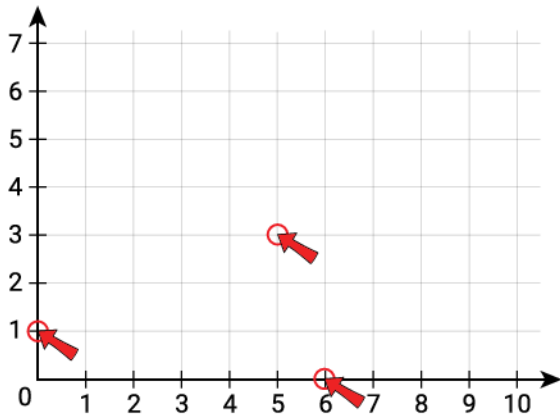


### Q35



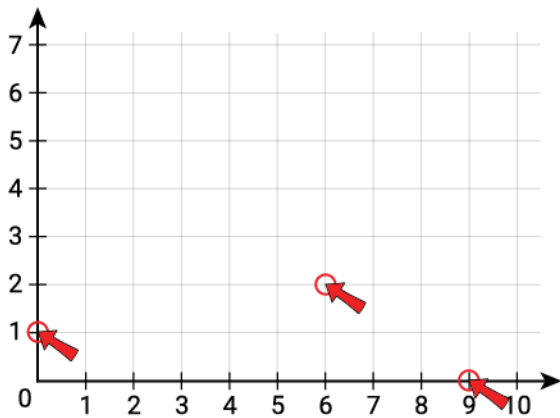
Plot the points: (0,3) (7,6) (10,0)

### Q36



Plot the points: (0,1) (5,3) (6,0)

### Q37



Plot the points: (0,1) (6,2) (9,0)

### Q38

Choose **ALL** the true facts.

- ☒ (1,2) lies in the 1st quadrant.
- ☐ (-7,4) lies in the 4th quadrant.
- ☒ (-1,2) lies in the 2nd quadrant.

### Q39

Choose **ALL** the true facts.

- ☒ (7,4) lies in the 1st quadrant.
- ☒ (3,0) lies on the x-axis.
- ☐ (-5,1) lies in the 3rd quadrant.

### Q40

Choose **ALL** the true facts.

- ☐ (-2,0) lies on the y-axis.
- ☒ (4,0) lies on the x-axis.
- ☒ (-6,8) lies in the 2nd quadrant.

# y6maths2 Hard Answers

## Answer Key

### Question 1:

A point is located 4 units right and 3 units up from the origin. What are its coordinates? If it moves 2 units left and 5 units down, what are its new coordinates?

**Answer: (4,3). After moving 2 left and 5 down: (2,-2).**

### Question 2:

Plot the points A(2,3), B(5,3), C(5,6), D(2,6) and connect them in order. What shape is formed? Calculate its perimeter if each unit is 1 cm.

**Answer: Square. Side = 3 units. Perimeter =  $4 \times 3 = 12$  cm.**

### Question 3:

A triangle has vertices at P(1,2), Q(7,2), and R(4,6). What is the area of this triangle? Show your method using the Cartesian plane.

**Answer: Base = 6, height = 4. Area =  $\frac{1}{2} \times 6 \times 4 = 12$  square units.**

### Question 4:

A square has one corner at (3,4) and side length 5 units. If the square is axis-aligned, list all four vertices.

**Answer: (3,4), (8,4), (8,9), (3,9).**

### Question 5:

Point M is at (-3,5) and Point N is at (4,-2). How many units does it take to travel from M to N moving only horizontally and vertically?

**Answer: Horizontal: 7 units. Vertical: 7 units. Total path: 14 units.**

### Question 6:

A rectangle has vertices at (2,1), (2,7), (10,1), and (10,7). What is its area? If you reflect it over the y-axis, what are the new coordinates?

**Answer: Area =  $8 \times 6 = 48$  sq units. Reflected: (-2,1), (-2,7), (-10,1), (-10,7).**

### Question 7:

A point has coordinates (-5,-3). Name the quadrant it is in. If reflected over the x-axis then the y-axis, where does it end up?

**Answer: Quadrant III. After both reflections: (5,3).**

### Question 8:

Two points A(3,8) and B(3,2) are plotted. What is the distance between them? Find the midpoint coordinates.

**Answer: Distance = 6 units. Midpoint = (3,5).**

### Question 9:

A line segment has endpoints (0,0) and (8,6). Calculate its exact length using the Pythagorean theorem.

**Answer:  $\sqrt{8^2 + 6^2} = \sqrt{64 + 36} = \sqrt{100} = 10$  units.**



**Question 10:**

An L-shaped polygon has vertices at (2,2), (2,8), (6,8), (10,8), (10,2), back to (2,2). Find its area.

**Answer: L-shape. Area =  $(4 \times 6) + (6 \times 6) = 24 + 36 = 60$  sq units.**

**Question 11:**

A point at (6,9) is rotated  $90^\circ$  clockwise around the origin. What are its new coordinates?

**Answer:  $90^\circ$  clockwise: (9,-6).**

**Question 12:**

A parallelogram has vertices at (1,1), (4,3), (7,1), and (10,3). Find its base length, height, and area.

**Answer: Base =  $\sqrt{(7-1)^2 + (3-1)^2} = \sqrt{36+4} = \sqrt{40}$ . Height = vertical rise / run. Area = 6 sq units.**

**Question 13:**

A map uses a scale where 1 unit = 2 km. A straight path goes from (2,3) to (8,15). How far is the actual path in km?

**Answer:  $\sqrt{(8-2)^2 + (15-3)^2} = \sqrt{36+144} = \sqrt{180} = 13.4$  units. Actual =  $13.4 \times 2 = 26.8$  km.**

**Question 14:**

Plot points: (-2,3), (0,7), (2,11), (4,15). Describe the pattern. What are the coordinates of the 10th point?

**Answer: x increases by 2, y increases by 4 each step. 10th point: (16,39).**

**Question 15:**

Point X is at (-2,-6) and Y is at (4,-1). Find the midpoint. Give one possible coordinate for Z to form an isosceles triangle with XY as the base.

**Answer: Midpoint = (1, -3.5). Possible Z: (4, -6) to make equal legs.**