

Homework/Extension

Step 1: The First Quadrant

National Curriculum Objectives:

Mathematics Year 6: (6P2) [Draw and translate simple shapes on the coordinate plane, and reflect them in the axes](#)

Mathematics Year 6: (6P3) [Describe positions on the full coordinate grid \(all four quadrants\)](#)

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

Developing Match the coordinates to the shapes plotted on a grid. Includes 5 x 5 grids with 3 or 4 points plotted to create triangles, squares and rectangles.

Expected Match the coordinates to the shapes plotted on a grid. Includes 10 x 10 grids with 5 or 6 points plotted to create pentagons and hexagons. Includes irregular pentagons.

Greater Depth Match the coordinates to the shapes plotted on a grid. Includes 10 x 10 grids with 6 or more points plotted to create heptagons and octagons. Involves irregular shapes with some points plotted between increments.

Questions 2, 5 and 8 (Varied Fluency)

Developing Identify the missing coordinates using a shape plotted on a grid. Includes 5 x 5 grids with 3 or 4 points plotted to create triangles and squares.

Expected Identify the missing coordinates using a shape plotted on a grid. Includes 10 x 10 grids with 5 or 6 points plotted to create pentagons and hexagons. Includes irregular pentagons.

Greater Depth Identify the missing coordinates using a shape plotted on a grid. Includes 10 x 10 grids with 6 or more points plotted to create heptagons and octagons. Involves irregular shapes with some points plotted between increments.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

Developing Plot coordinates on a grid to identify who is correct and explain why. Includes 5 x 5 grids with 3 or 4 points plotted to create triangles and squares.

Expected Plot coordinates on a grid to identify who is correct and explain why. Includes 10 x 10 grids with 5 or 6 points plotted to create pentagons and hexagons. Includes irregular pentagons.

Greater Depth Plot coordinates on a grid to identify who is correct and explain why. Includes 10 x 10 grids with 6 or more points plotted to create heptagons and octagons. Involves irregular shapes with some points plotted between increments.

More [Year 6 Position and Direction](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

The First Quadrant

1. Match the shapes drawn on the grid to the correct person using the coordinates they have given.



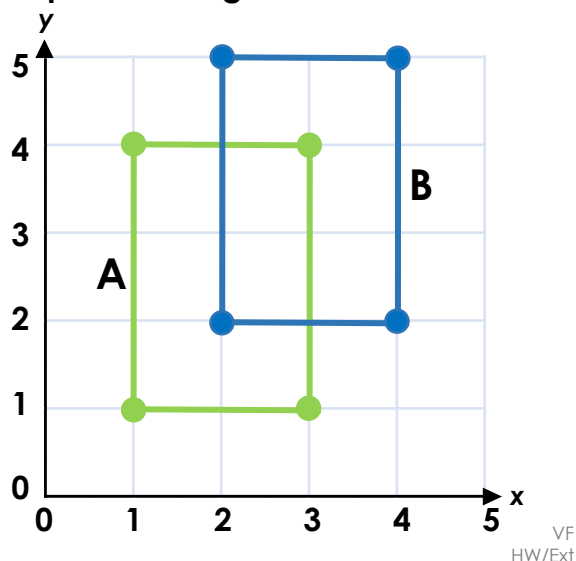
Abel

My coordinates are: $(2, 2)$; $(4, 2)$; $(2, 5)$ and $(4, 5)$.



Inaya

My coordinates are: $(1, 1)$; $(3, 1)$; $(1, 4)$ and $(3, 4)$.

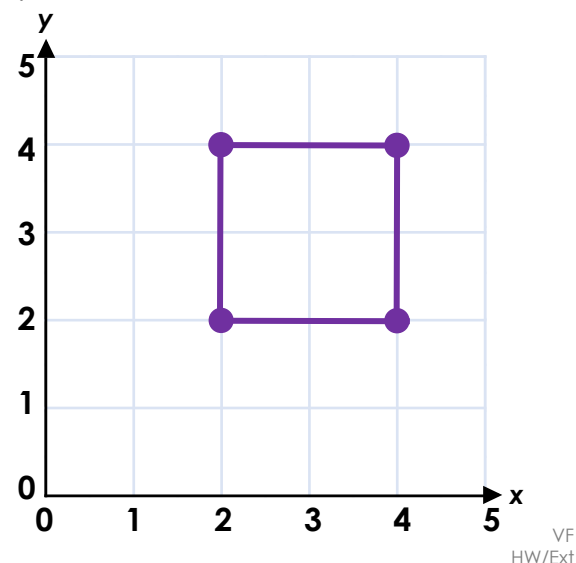


2. Armando has made an square on the grid below.

Two of the coordinates are:

$(2, 2)$ $(4, 2)$

What are the other two coordinates?



3. Cara and Casey have been given three coordinates to plot on the grid below.

$(2, 1)$ $(2, 5)$ $(5, 1)$



Cara

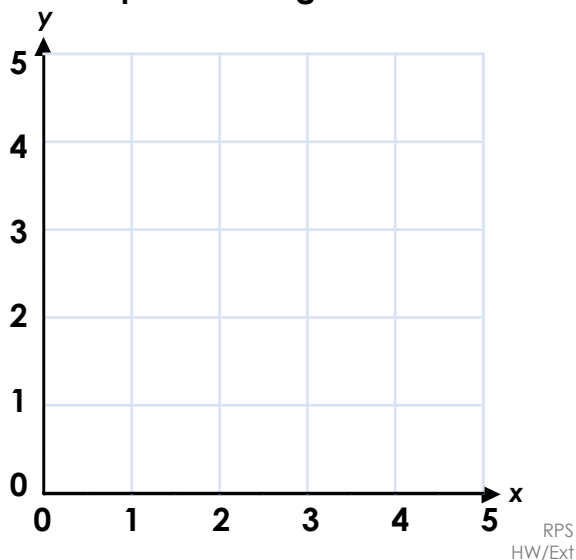
The coordinates can be joined to make a right angled triangle.

The coordinates can be joined to make an equilateral triangle.



Casey

Who do you agree with? Explain your answer.



The First Quadrant

4. Match the shapes drawn on the grid to the correct person using the coordinates they have given.



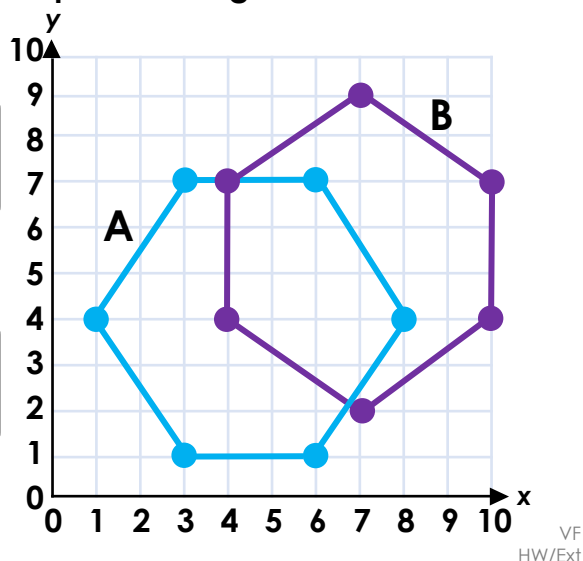
Qasim

My coordinates are: (1, 4); (3, 7); (6, 7); (8, 4); (6, 1) and (3, 1).



Atifa

My coordinates are: (4, 4); (4, 7); (7, 9); (7, 2); (10, 4) and (10, 7).

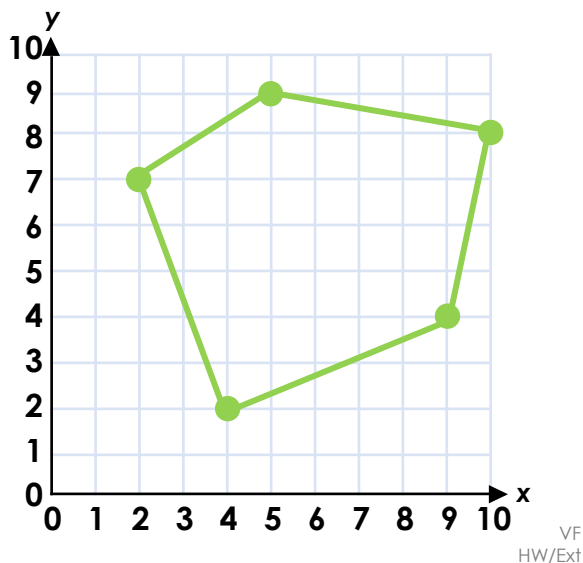


5. Alan has made an irregular pentagon on the grid below.

Three of the coordinates are:

(2, 7) (10, 8) (5, 9)

What are the other two coordinates?



6. Alissa and Ray have been given five coordinates to plot on the grid below.

(4, 6) (4, 10) (8, 6) (8, 10) (2, 8)



Alissa

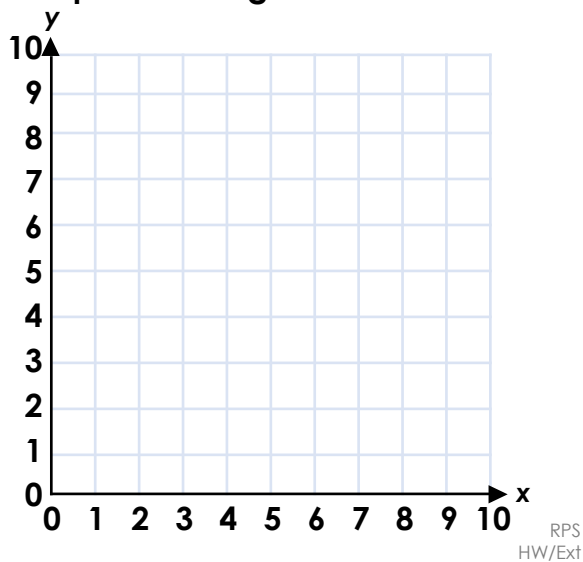
The coordinates can be joined to make a regular pentagon.

The coordinates can be joined to make an irregular pentagon.



Ray

Who do you agree with? Explain your answer.



The First Quadrant

7. Match the shapes drawn on the grid to the correct person using the coordinates they have given.



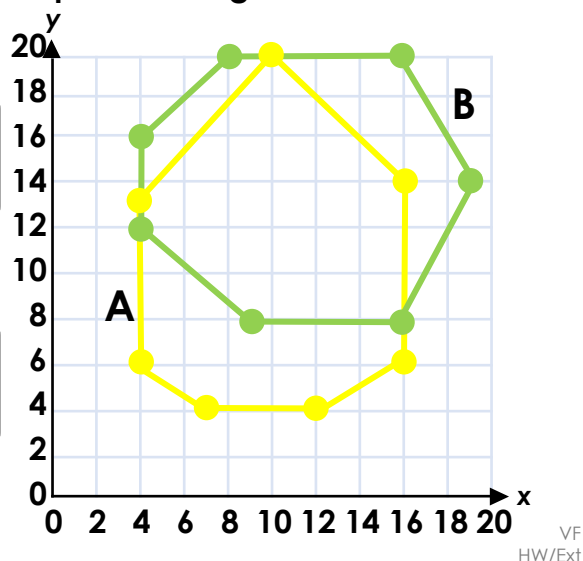
Lucas

My coordinates are: (4, 16); (16, 8); (9, 8); (19, 14); (4, 12); (8, 20) and (16, 20).



Martha

My coordinates are: (4, 6); (5, 4); (4, 13); (10, 20); (16, 6); (12, 4) and (16, 14).

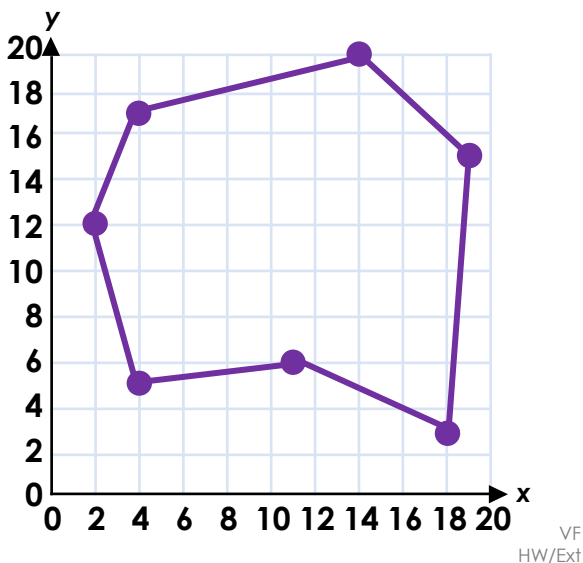


8. Aron has made an irregular heptagon on the grid below.

Four of the coordinates are:

(4, 5) (2, 12) (4, 17) (14, 20)

What are the other three coordinates?



9. Susan and Carter have been given eight coordinates to plot on the grid below.

(18, 4) (18, 8) (14, 12) (10, 12)
(6, 4) (6, 8) (10, 0) (14, 0)



Susan

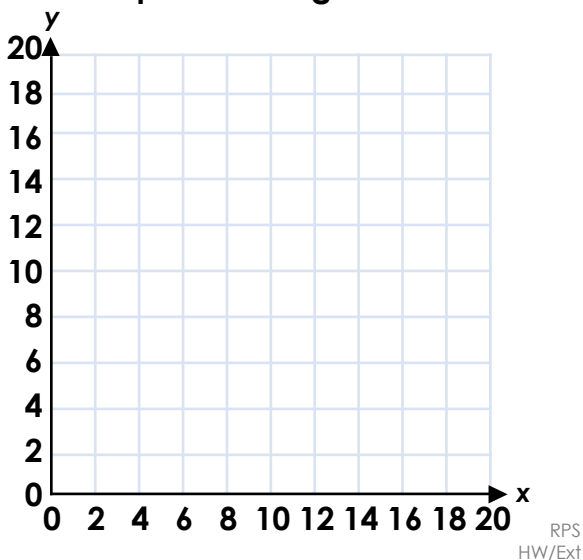
The coordinates can be joined to make a regular octagon.

The coordinates can be joined to make an irregular octagon.



Carter

Who do you agree with? Explain your answer.



Homework/Extension

The First Quadrant

Developing

1. Abel = B; Inaya = A
2. (2, 4) and (4, 4)
3. Cara is correct because the coordinates create a triangle that has a right angle and all the sides are different lengths.

Expected

4. Qasim = A; Atifa = B
5. (4, 2) and (9, 4)
6. Ray is correct because the coordinates create a pentagon where length of some sides and the angles are different.

Greater Depth

7. Lucas = B; Martha = A
8. (19, 15), (18, 3) and (11, 6)
9. Susan is correct because the coordinates create an octagon where the length of each side is the same.