

Year 5 Unit 13 – Position and Direction

Unit 13
Geometry = position and direction

Discover

What are coordinates?

- Coordinates are a way of finding the position of a point on a grid.
- Coordinates are written as a pair of numbers.
- The first number tells you the column (horizontal).
- The second number tells you the row (vertical).

What is a coordinate grid?

A coordinate grid is a grid with a horizontal axis (x-axis) and a vertical axis (y-axis). The intersection of the two axes is called the origin (0,0). The grid is divided into four quadrants by the axes.

Starter
Pages 58-59

Read and plot coordinates

Discover

1. Plot the point (3, 2) on the grid.

2. Plot the point (4, 3) on the grid.

3. Plot the point (5, 4) on the grid.

4. Plot the point (6, 5) on the grid.

5. Plot the point (7, 6) on the grid.

6. Plot the point (8, 7) on the grid.

7. Plot the point (9, 8) on the grid.

8. Plot the point (10, 9) on the grid.

9. Plot the point (11, 10) on the grid.

10. Plot the point (12, 11) on the grid.

1. Read and plot coordinates
Pages 60-63

Problem solving with coordinates

Discover

1. Plot the point (3, 2) on the grid.

2. Plot the point (4, 3) on the grid.

3. Plot the point (5, 4) on the grid.

4. Plot the point (6, 5) on the grid.

5. Plot the point (7, 6) on the grid.

6. Plot the point (8, 7) on the grid.

7. Plot the point (9, 8) on the grid.

8. Plot the point (10, 9) on the grid.

9. Plot the point (11, 10) on the grid.

10. Plot the point (12, 11) on the grid.

2. Problem solving with coordinates
Pages 64-67

Translate shapes

Discover

1. Translate the shape 2 units to the right.

2. Translate the shape 2 units to the left.

3. Translate the shape 2 units up.

4. Translate the shape 2 units down.

3. Translate shapes
Pages 68-71

Translate points

Discover

1. Translate the point (3, 2) 2 units to the right.

2. Translate the point (3, 2) 2 units to the left.

3. Translate the point (3, 2) 2 units up.

4. Translate the point (3, 2) 2 units down.

4. Translate points
Pages 72-75

Reflection

Discover

1. Reflect the point (3, 2) across the x-axis.

2. Reflect the point (3, 2) across the y-axis.

3. Reflect the point (3, 2) across the line $y = x$.

4. Reflect the point (3, 2) across the line $y = -x$.

5. Reflection
Pages 76-79

Reflection in horizontal and vertical lines

Discover

1. Reflect the point (3, 2) across the x-axis.

2. Reflect the point (3, 2) across the y-axis.

3. Reflect the point (3, 2) across the line $y = x$.

4. Reflect the point (3, 2) across the line $y = -x$.

6. Reflection in horizontal and vertical lines
Pages 80-83