# Homework/Extension Step 4: Describe Movement

# National Curriculum Objectives:

Mathematics Year 4: (4P2) <u>Describe movements between positions as translations of a</u> <u>given unit to the left/right and up/down</u> Mathematics Year 4: (4P3a) <u>Describe positions on a 2-D grid as coordinates in the first</u> <u>quadrant</u>

## Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

**Developing** Determine which grid correctly describes the one-step translations (left, right, up or down) of singular points on a 2D grid. All points plotted on a 5x5 grid (using 1:1 scale).

Expected Determine which grid correctly describes the two-step translations of singular points on a 2D grid. All points plotted on a 10x10 grid (using 1:1 scale).

Greater Depth Determine which grid supports the two-step translations of singular points. All points plotted on a 10x10 grid where the scale goes up in increments of 8.

### Questions 2, 5 and 8 (Varied Fluency)

Developing Describe the position of two shapes to support one-step translations (left, right, up or down) of singular points on a 2D grid. All points plotted on a 5x5 grid, using 1:1 scale. Expected Describe the two-step translation of two shapes plotted on a 2D grid. All points plotted on a 10x10 grid, using 1:1 scale.

Greater Depth Describe the position of different shapes to support two-step translations of singular points. All shapes plotted on a 10x10 grid where the scale goes up in increments of 4.

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

Developing Determine if a statement is correct to support one-step translations (left, right, up or down) of singular shapes on a 2D grid. All shapes plotted on a 5x5 grid, using 1:1 scale.

Expected Determine if a statement is correct to support two-step translations of singular shapes on a 2D grid. All shapes plotted on a 10x10 grid, using 1:1 scale.

Greater Depth Determine if a statement is correct to support two-step translations of singular shapes. All shapes plotted on a 10x10 grid where the scale goes up in increments of 6.

# More <u>Year 4 Position and Direction</u> resources.

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Homework/Extension – Describe Movement – Teaching Information

## **Describe Movement**



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Homework/Extension – Describe Movement – Year 4 Expected



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### Homework/Extension Describe Movement

#### **Developing**

1. A

2. A: up; B: down; C: 2 left; D: 2 down.

3. Yes because when shape B is translated the coordinates are (1, 4) and A is (2, 4), so they have the same y coordinate.

### **Expected**

**4**. **B** 

5. A: 1 right and 7 up; B: 2 right and 4 up; C: 6 right and 1 up; D: 2 left and 7 down.

6. No because when shape A is translated 5 up the new coordinates are (2, 7). Shape B coordinates are (7, 6), so they have a different y coordinate.

### Greater Depth

7. <mark>A</mark>

8. A: 28 right and 16 up; B: 4 left and 24 down; C: 12 left and 8 up; D: 24 right and 28 up.
9. Yes because when shape A is translated 24 right and 30 down the new coordinates are (36, 12) and shape B is on (36, 6), so they have the same x coordinate.



