

Varied Fluency

Step 4: Describe Movement

National Curriculum Objectives:

Mathematics Year 4: (4P2) [Describe movements between positions as translations of a given unit to the left/right and up/down](#)

Mathematics Year 4: (4P3a) [Describe positions on a 2-D grid as coordinates in the first quadrant](#)

Differentiation:

Developing Questions 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 Questions to support two-step translations of singular points on a 2D grid. All points plotted on a 10x10 grid (using 1:1 scale)

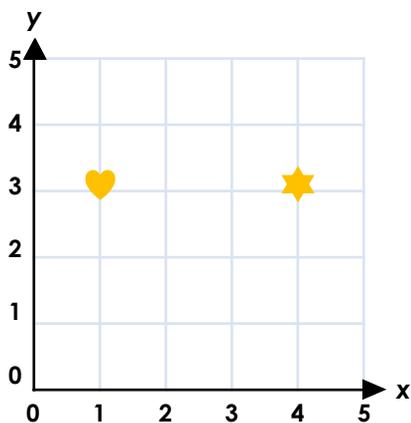
Greater Depth Questions to support two-step translations of singular points. All points plotted on a 10x10 grid (using varying scales) with some points plotted between increments.

More [Year 4 Position and Direction](#) resources.

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

Describe Movement

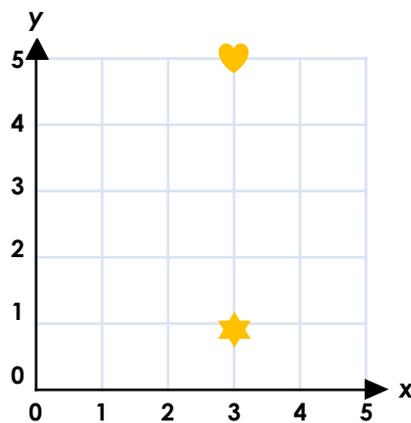
1a. Describe the movement needed for the heart to reach the star.



VF

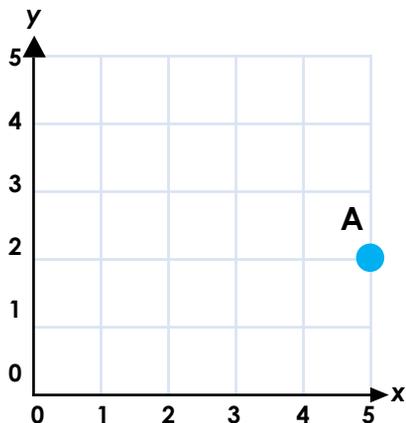
Describe Movement

1b. Describe the movement needed for the star to reach the heart.



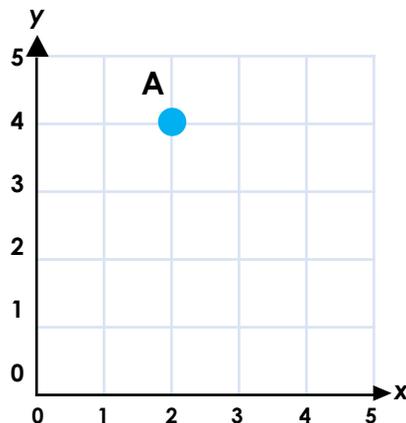
VF

2a. Translate point A left 4.
What are the coordinates?



VF

2b. Translate point A down 3.
What are the coordinates?



VF

3a. A point is plotted on a grid on (1, 4).

It is translated 3 down.

What are the new coordinates?



VF

3b. A point is plotted on a grid on (2, 2).

It is translated 3 right.

What are the new coordinates?



VF

4a. Sam plotted a point on a grid at (3, 3).

It is translated to (3, 5).

How is it translated?



VF

4b. Carl plotted a point on a grid at (1, 5).

It is translated to (4, 5).

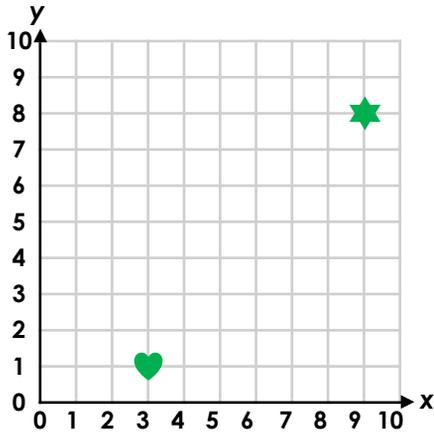
How is it translated?



VF

Describe Movement

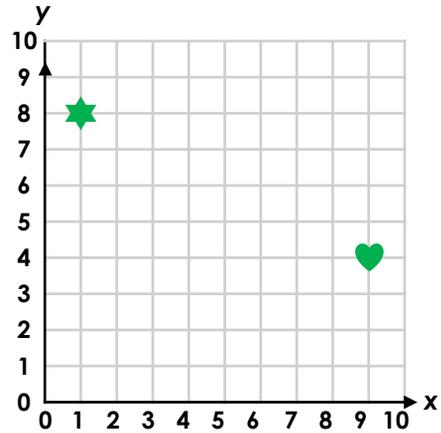
5a. Describe the movement needed for the star to reach the heart.



VF

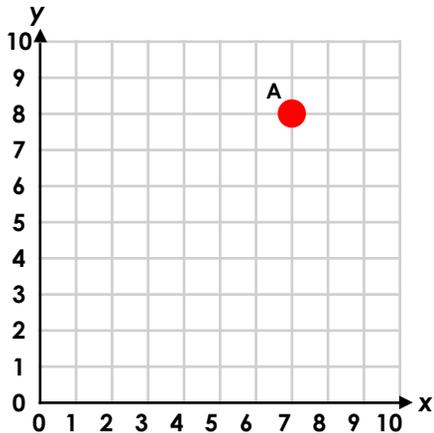
Describe Movement

5b. Describe the movement needed for the heart to reach the star.



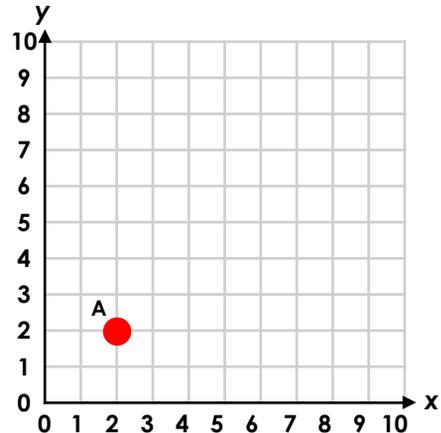
VF

6a. Translate point A 5 left and 7 down.
What are the coordinates?



VF

6b. Translate point A 7 right and 6 up.
What are the coordinates?



VF

7a. A point is plotted on a grid at (6, 8).

It is translated 4 left and 5 down.

What are the new coordinates?



VF

7b. A point is plotted on a grid at (0, 4).

It is translated 8 right and 5 up.

What are the new coordinates?



VF

8a. Eve plotted a point on a grid at (5, 2).

It is translated to (8, 8).

How is it translated?



VF

8b. Saira plotted a point on grid at (7, 8).

It is translated to (3, 7).

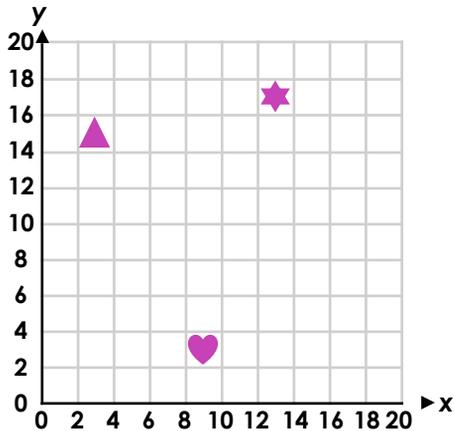
How is it translated?



VF

Describe Movement

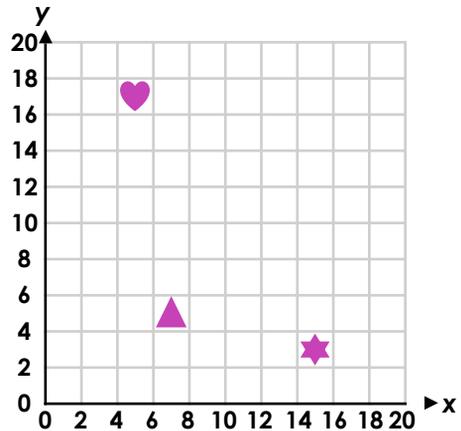
9a. Describe the movement needed for the triangle to go to the star, then to the heart.



VF

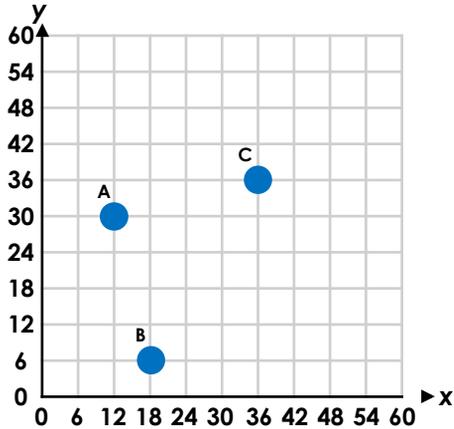
Describe Movement

9b. Describe the movement needed for the star to go to the heart, then to the triangle.



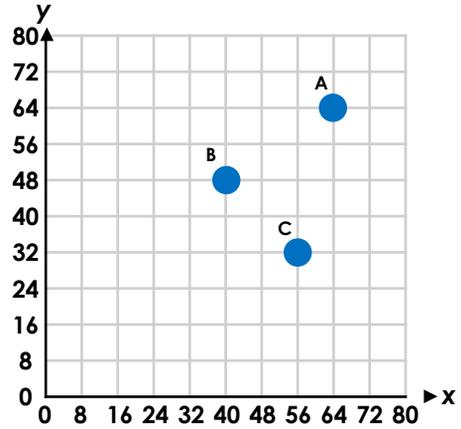
VF

10a. Translate points A, B and C by 24 right and 18 up. What are the new coordinates?



VF

10b. Translate points A, B and C 24 left and 32 down. What are the new coordinates?



VF

11a. Points A (4, 12), B (8, 36) and C (24, 20) were translated 12 right and 8 down on a grid with a scale increase of 4.

What are the new coordinates?



VF

11b. Points A (0, 4), B (20, 8) and C (24, 12) were translated 16 right and 24 up on a grid with a scale increase of 4.

What are the new coordinates?



VF

12a. Chloe plotted points A (16, 4), B (8, 8) and C (12, 16) on a grid with a scale increase of 4. They are translated to (32, 24), (24, 28) and (28, 36).

How are the points translated?



VF

12b. Qasim plotted points A (24, 36), B (30, 42) and C (54, 48) on a grid with a scale increase of 6. They are translated to (6, 24), (12, 30) and (36, 36)

How are the points translated?



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Developing

- 1a. 3 right
- 2a. (1, 2)
- 3a. (1, 1)
- 4a. 2 up

Expected

- 5a. 6 left and 7 down
- 6a. (2, 1)
- 7a. (2, 3)
- 8a. 3 right and 6 up

Greater Depth

- 9a. 10 right and 2 up; 14 down and 4 left
- 10a. A. (36, 48); B. (42, 24); C. (60, 54)
- 11a. A. (16, 4); B. (20, 28); C. (36, 12)
- 12a. 16 right and 20 up

Varied Fluency
Describe Movement

Developing

- 1b. 4 up
- 2b. (2, 1)
- 3b. (5, 2)
- 4b. 3 right

Expected

- 5b. 8 left and 4 up
- 6b. (9, 8)
- 7b. (8, 9)
- 8b. 4 left and 1 down

Greater Depth

- 9b. 10 left and 14 up; 2 right and 12 down
- 10b. A. (40, 32); B. (16, 16); C. (32, 0)
- 11b. A. (16, 28); B. (36, 32); C. (40, 36)
- 12b. 18 left and 12 down