

# Varied Fluency

## Step 3: Translations

### 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:

**Developing** Questions to support translating regular shapes with up to four sides in all four quadrants. Including one movement per translation.

**Expected** Questions to support translating shapes with up to four sides in all four quadrants where some shapes may be irregular. Including up to two movements per translation.

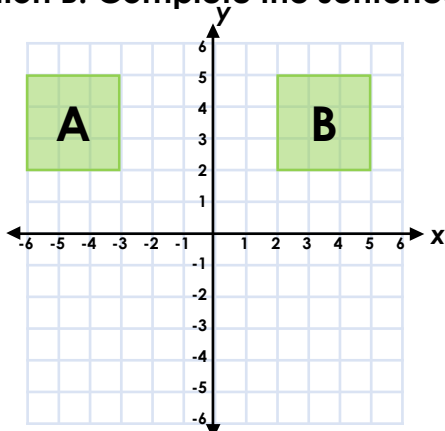
**Greater Depth** Questions to support translating shapes with up to six sides in all four quadrants where some shapes may be irregular. Including two movements per translation and grids of varying scales with some points plotted between increments.

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

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

## Translations

1a. A shape is translated from position A to position B. Complete the sentence:



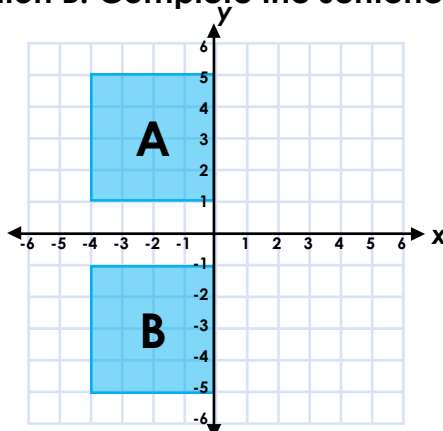
The shape has moved  squares to the right.



VF

## Translations

1b. A shape is translated from position A to position B. Complete the sentence:

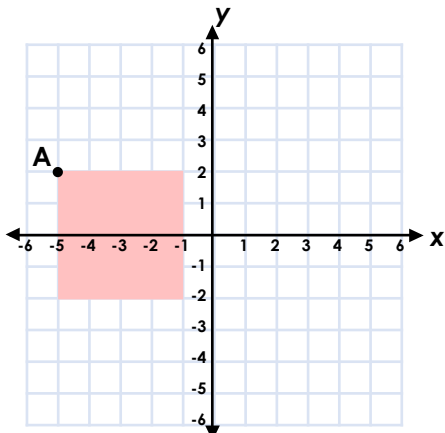


The shape has moved  squares down.



VF

2a. Translate this shape 5 squares to the right.

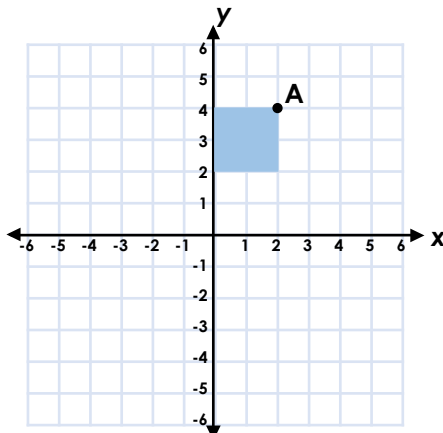


What are its new coordinates?



VF

2b. Translate this shape 3 squares to the left.

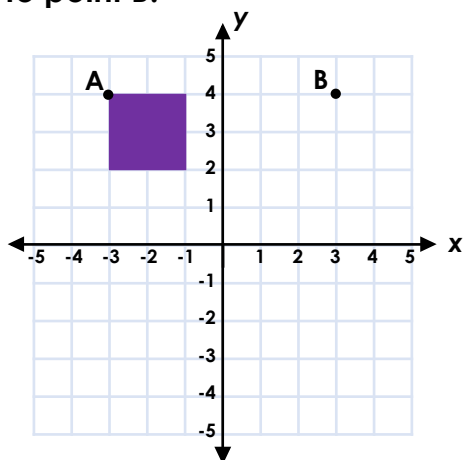


What are its new coordinates?



VF

3a. This shape is translated so that point A moves to point B.

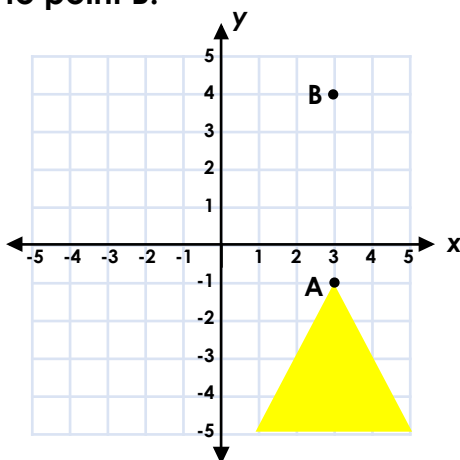


Draw the shape in its new position and write down the coordinates.



VF

3b. This shape is translated so that point A moves to point B.



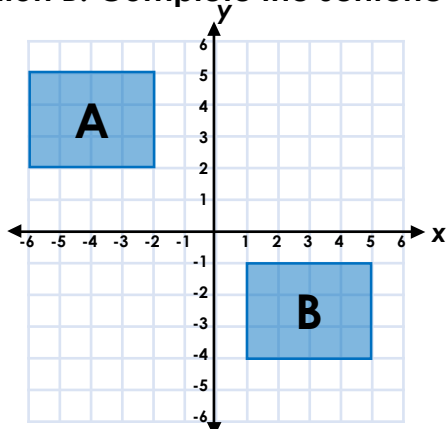
Draw the shape in its new position and write down the coordinates.



VF

## Translations

4a. A shape is translated from position A to position B. Complete the sentence:



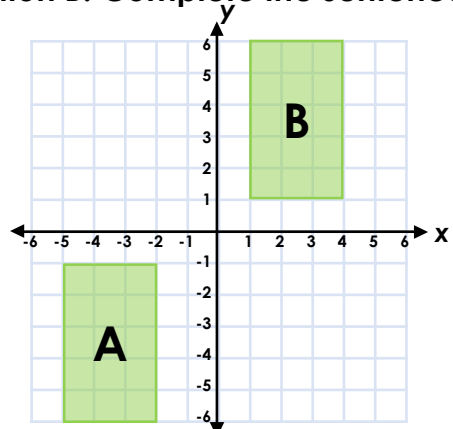
The shape has moved  squares to the right and  squares down.



VF

## Translations

4b. A shape is translated from position A to position B. Complete the sentence:

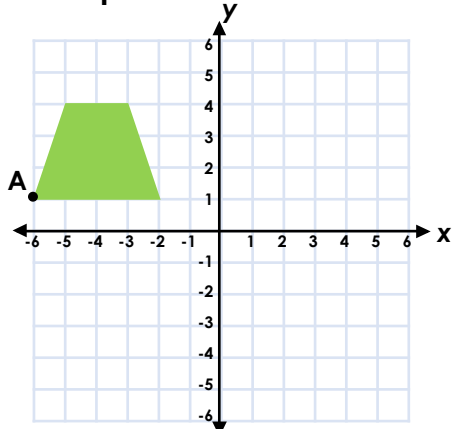


The shape has moved  squares to the right and  squares up.



VF

5a. Translate this shape 6 squares to the right and 4 squares down.

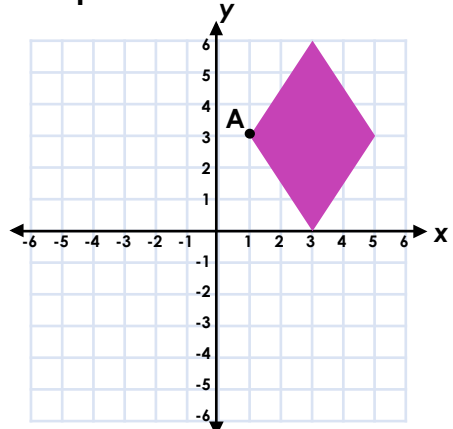


What are its new coordinates?



VF

5b. Translate this shape 7 squares to the left and 5 squares down.

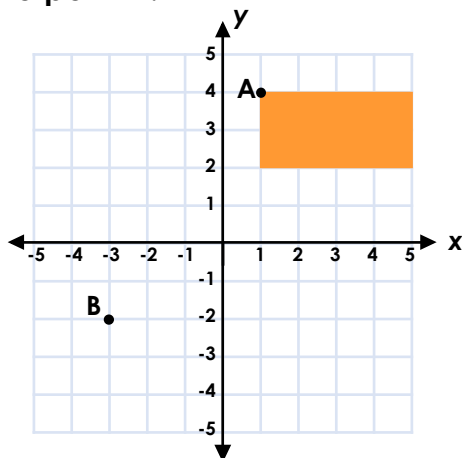


What are its new coordinates?



VF

6a. This shape is translated so that point A moves to point B.

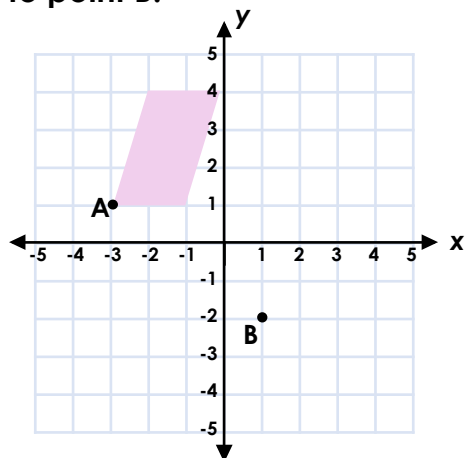


Draw the shape in its new position and write down the coordinates.



VF

6b. This shape is translated so that point A moves to point B.



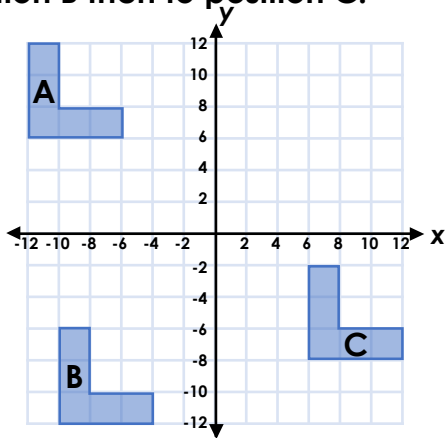
Draw the shape in its new position and write down the coordinates.



VF

## Translations

7a. A shape is translated from position A to position B then to position C.



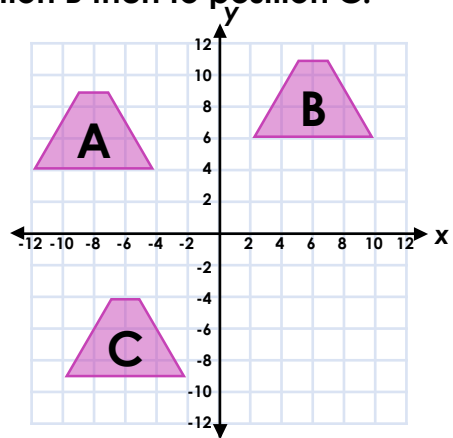
Describe the translations.



VF

## Translations

7b. A shape is translated from position A to position B then to position C.

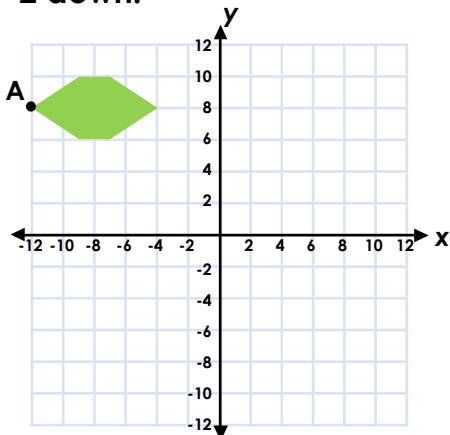


Describe the translations.



VF

8a. Translate this shape 6 + 1 to the right and 5 - 2 down.

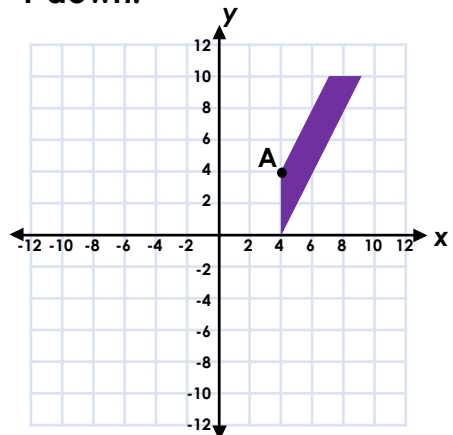


What are its new coordinates?



VF

8b. Translate this shape 4 + 2 to the left and 3 - 1 down.

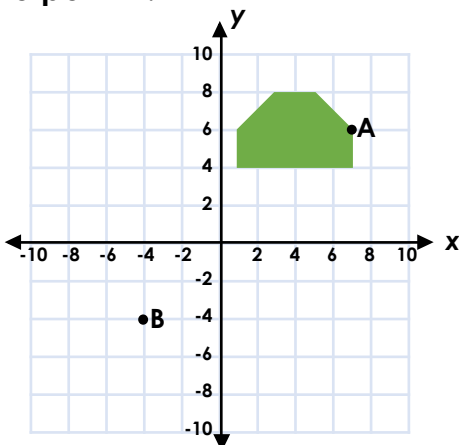


What are its new coordinates?



VF

9a. This shape is translated so that point A moves to point B.

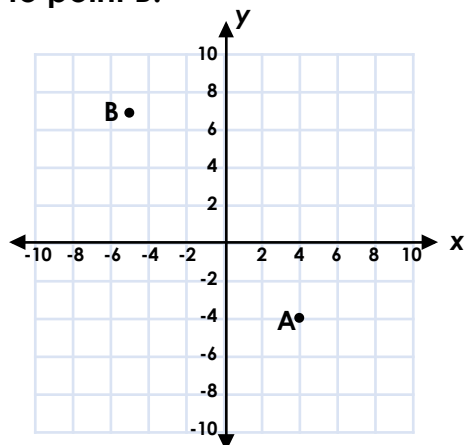


Draw the shape in its new position and write down the coordinates.



VF

9b. This shape is translated so that point A moves to point B.



Draw the shape in its new position and write down the coordinates.



VF

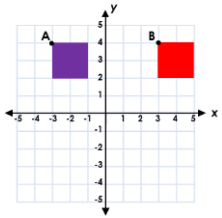
## Varied Fluency Translations

### Developing

1a. 8

2a. Clockwise from A: (0, 2), (4, 2), (4, -2), (0, -2)

3a. Clockwise from B: (3, 4), (5, 4), (5, 2), (3, 2)

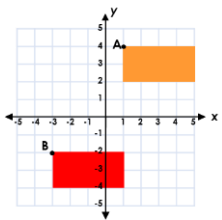


### Expected

4a. 7; 6

5a. Clockwise from A: (0, -3), (1, 0), (3, 0), (4, -3)

6a. Clockwise from B: (-3, -2), (1, -2), (1, -4), (-3, -4)

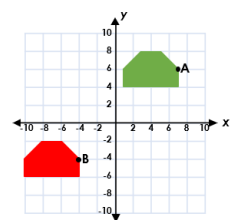


### Greater Depth

7a. First the shape was translated 18 down and 2 to the right. Then it was translated 4 up and 16 to the right.

8a. Clockwise from A: (-5, 5), (-2, 7), (0, 7), (3, 5), (0, 3), (-2, 3)

9a. Clockwise from B: (-4, -4), (-4, -6), (-10, -6), (-10, -4), (-8, -2), (-6, -2)



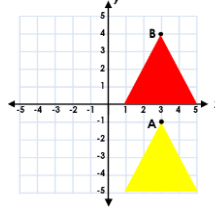
## Varied Fluency Translations

### Developing

1b. 6

2b. Clockwise from A: (-1, 4), (-1, 2), (-3, 2), (-3, 4)

3b. Clockwise from B: (3, 4), (5, 0), (1, 0)

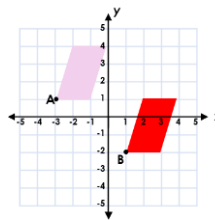


### Expected

4b. 6; 7

5b. Clockwise from A: (-6, -2), (-4, 1), (-2, -2), (-4, -5)

6b. Clockwise from B: (1, -2), (2, 1), (4, 1), (3, -2)



### Greater Depth

7b. First the shape was translated 2 up and 14 to the right. Then it was translated 15 down and 12 to the left.

8b. Clockwise from A: (-2, 2), (1, 8), (3, 8), (-2, -2)

9b. Clockwise from B: (-5, 7), (-3, 7), (-1, 5), (-1, 1), (-3, 1), (-5, 3)

