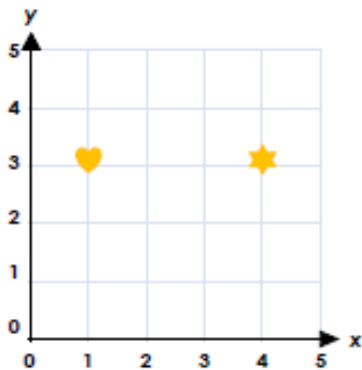
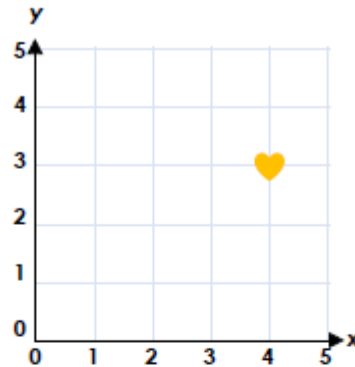


1a. Describe the movement needed for the heart to reach the star.



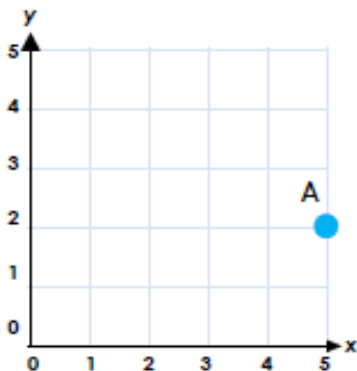
VF

1b. The heart has been translated. Its starting coordinates were (1, 3). Kayleigh says it has moved 4 right. Is she correct? Explain.



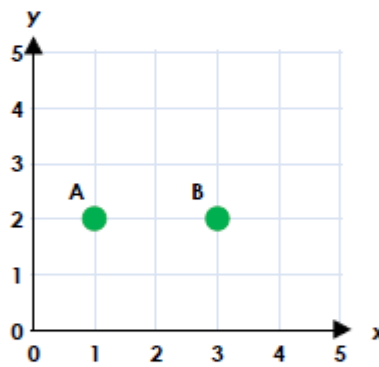
R

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



VF

2b. Point A has been translated. Write the translation made and the coordinates of the start and finish positions of the point.



PS

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

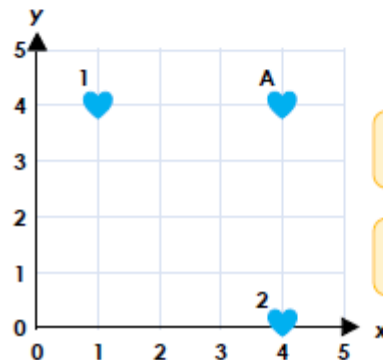
It is translated 3 down.

What are the new coordinates?



VF

3b. Heart A has been translated two times. Match the shape to the correct translation statement.



A. 3 left

B. 4 down

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

It is translated to (3, 5).

How is it translated?

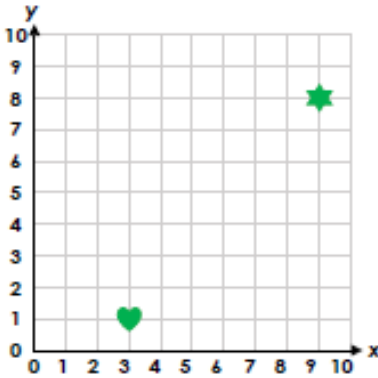


VF



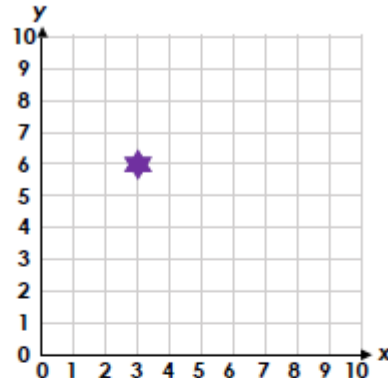
PS

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



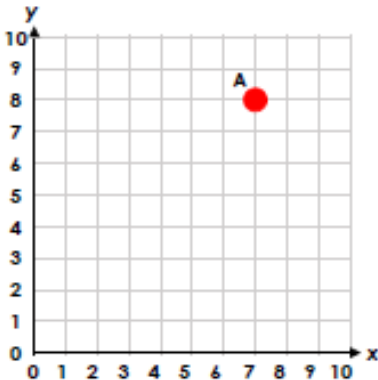
VF

4b. The star has been translated. Its starting coordinates were (5, 8). Ali says it has moved 2 left and 2 down. Is he correct? Explain.



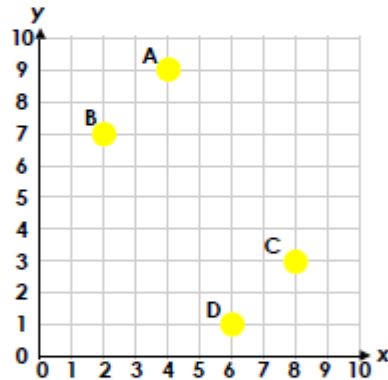
R

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



VF

5b. Points A and B have made exactly the same translations. Write the translations made and the coordinates of the start and finish positions of each point.



PS

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

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

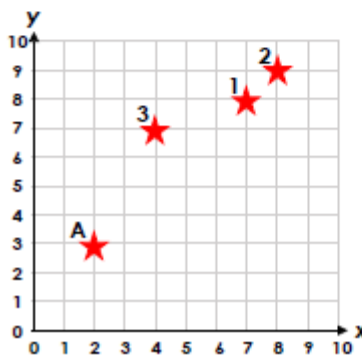
It is translated to (8, 8).

How is it translated?



VF

6b. Star A has been translated three times. Match each numbered point to the correct translation statement.



A. 5 right and 5 up

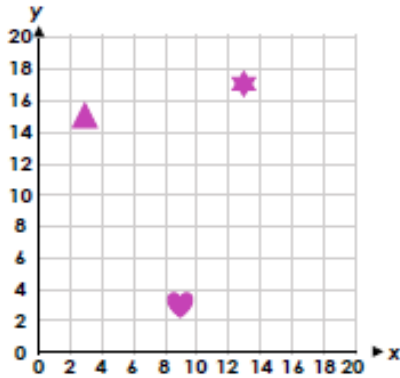
B. 2 right and 4 up

C. 6 right and 6 up



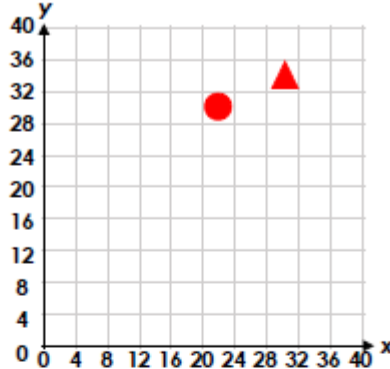
PS

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



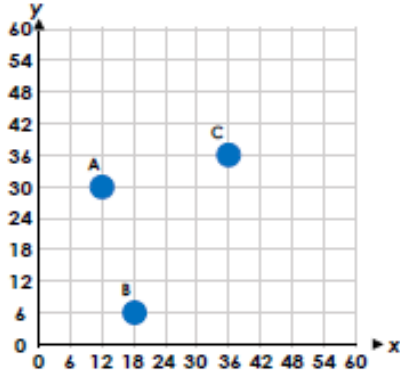
VF

7b. The triangle and circle have been translated from (18, 18) and (10, 14). Tiana says they have both moved 16 right and 16 down. Is she correct? Explain.



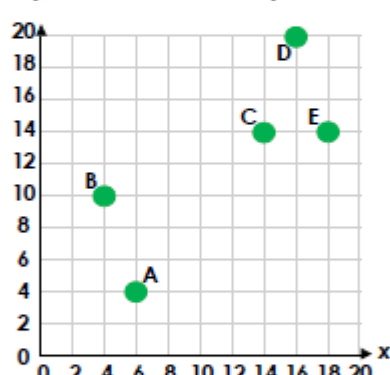
R

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



VF

8b. Points A and B have made exactly the same translations. Write the translations made and the coordinates of the start and finish positions of each point.



PS

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

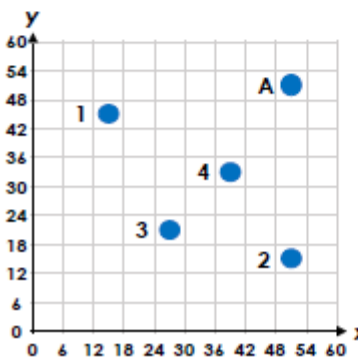
12a. Chloe plotted points A (16, 4), B (8, 8) and C (12, 16) on a grid with a scale increase of 4. They are translated to (32, 24), (24, 28) and (28, 36).

How are the points translated?



VF

9b. Point A has been translated four times. Match each numbered point to the correct translation statement.



A. 12 left and 18 down

B. 36 left and 6 down

C. 36 down

D. 24 left and 30 down



PS

Answers

Developing

1a. 3 right

2a. (1, 2)

3a. (1, 1)

4a. 2 up

Developing

1b. No because the heart has moved 3 squares right.

2b. It has moved 2 squares right. A (1, 2) has moved to B (3, 2).

3b. 1A; 2B

Expected

5a. 6 left and 7 down

6a. (2, 1)

7a. (2, 3)

8a. 3 right and 6 up

Expected

4b. Yes, Ali is right because the new coordinates are (3, 6).

5b. They have both moved 4 squares right and 6 squares down. A (4, 9) has moved to C (8, 3); B (2,7) has moved to D (6, 1).

6b. 1A; 2C; 3B

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

Greater Depth

7b. No, she is incorrect because they both move 12 right and 16 up.

8b. They have both moved 12 right and 20 down. A (6, 4) has moved to E (18, 14); B (4, 10) has moved to D (16, 20).

9b. 1B; 2C; 3D; 4A