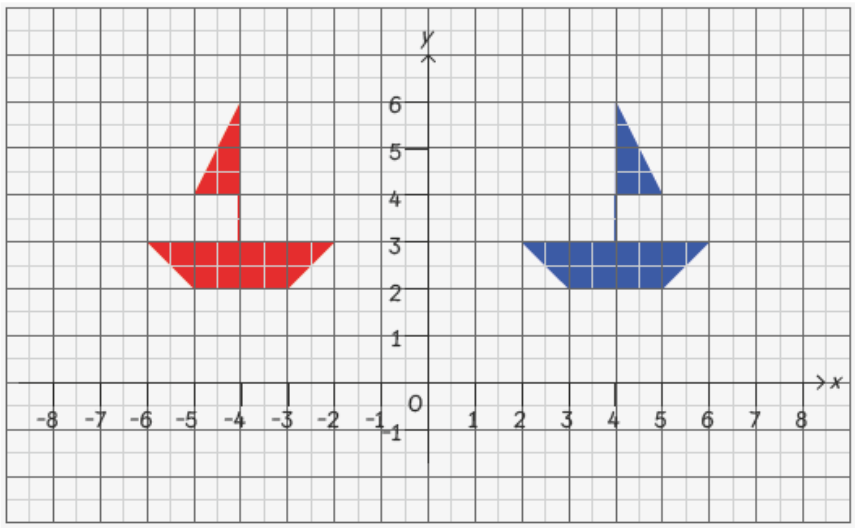
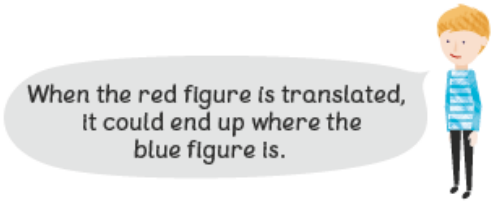
Lesson 8

Describing Movements

In Focus





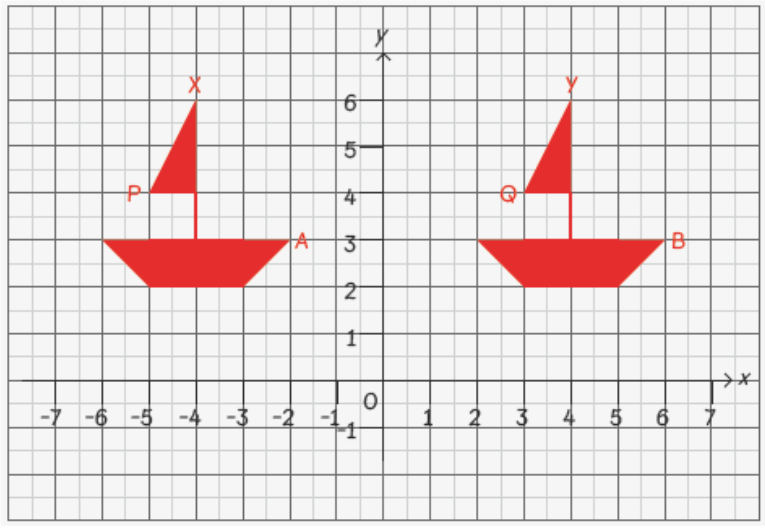
Is correct?

Position and Movement Page 194

When the red figure is translated, it becomes the blue figure. Can you prove me wrong? Can you define translation. What do you think would happen if this shape was translated 8 units to the right. What would it look like? Is it close to the blue figure? What are the new coordinates? Now try to reflect the red figure. What happens now? What are the new coordinates? What is the same what is different between reflection and translation?

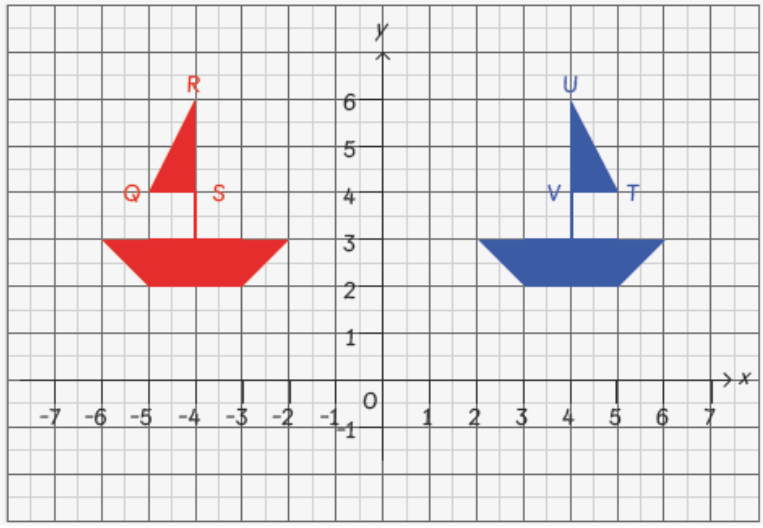
Let's Learn

1 The figure is translated.



When the figure is translated to the right by 8 units,

2 The figure is reflected.

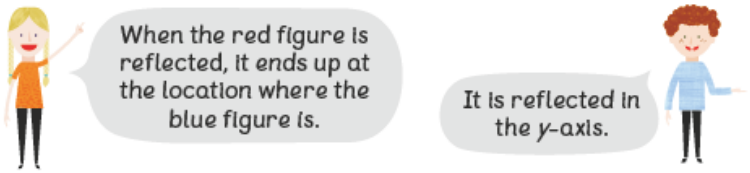


When the figure is reflected in the y-axis,

$Q(-5, 4)$ ends up at $T(5, 4)$.

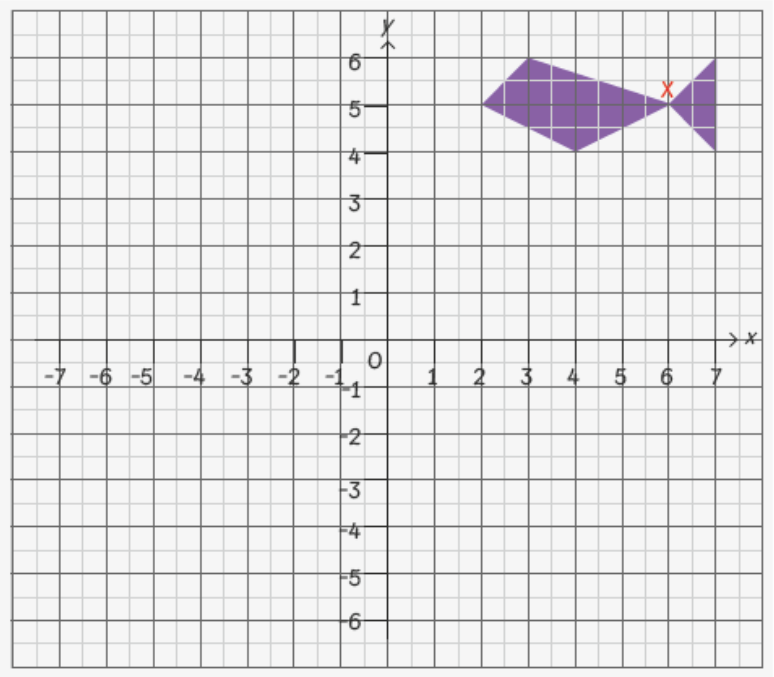
$R(-4, 6)$ ends up at $U(4, 6)$.

$S(-4, 4)$ ends up at $V(4, 4)$.



Guided Practice

1



(a) Reflect the figure shown in the x-axis. Draw the image.

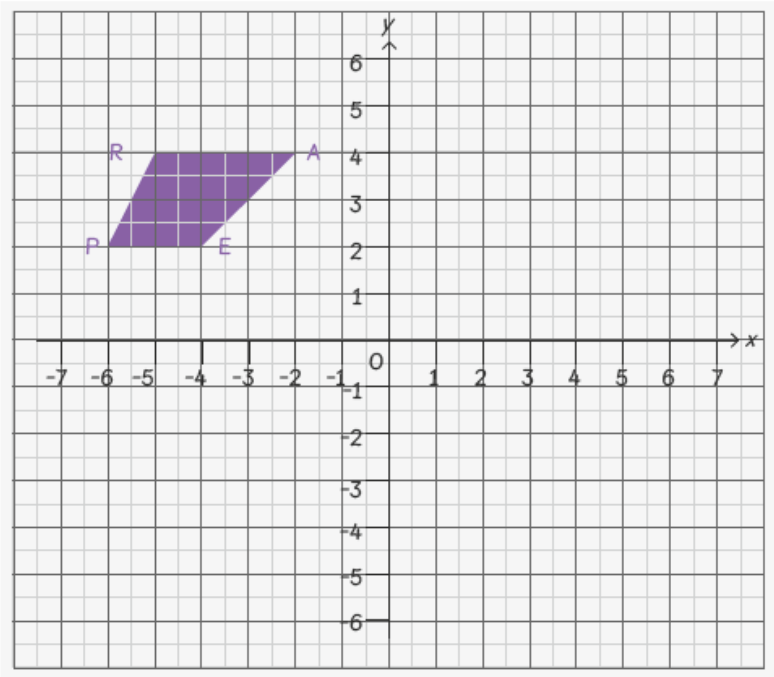
(b) Translate the figure shown 8 units downwards. Draw the image.

(c) thinks that both (a) and (b) are the same movement.
Explain why is wrong.

(d) Another movement takes the point X(6, 5) to the point (−6, 5).
(i) Can the movement be a translation? Describe the translation.
(ii) Can the movement be a reflection? Describe the reflection.

In each case, find the coordinates of the vertices of the quadrilateral after the movement.

2

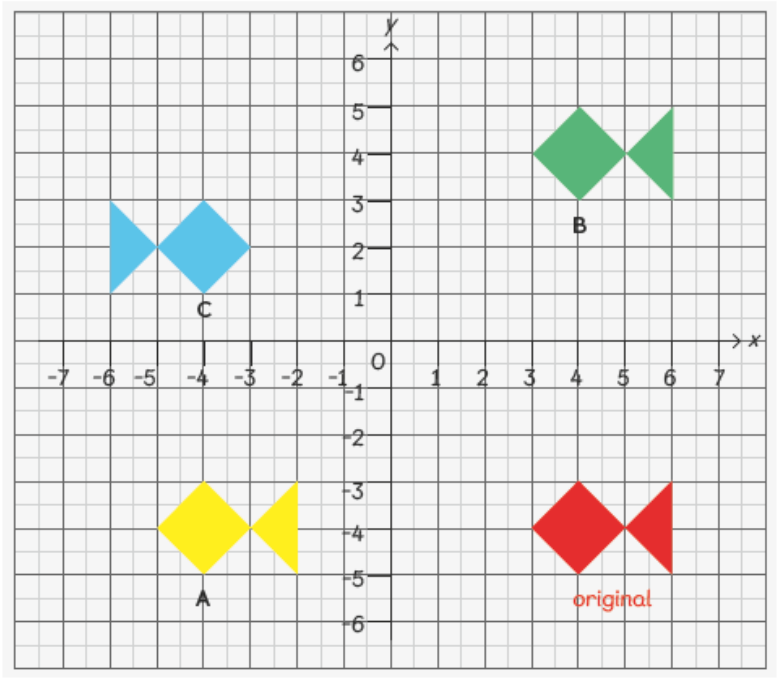


(a) Trapezium PEAR is reflected in the x-axis. Complete the table.

vertex	coordinates before reflection	coordinates after reflection
P	(−6, 2)	(−6, −2)
E	(,)	(,)
A	(,)	(,)
R	(,)	(,)

(b) Is it possible for P(-6, 2) to end up at (-6, -2) under a translation? If so, describe it.

3



(a) Describe the translation that moves to the position shown by A.

(b) Describe the translation that moves to the position shown by B.

(c) Describe the reflection that moves to the position shown by B.

(d) Describe the translation and reflection that moves to the position shown by C.

Complete Worksheet **8** – Page **142 – 143**