Diving into Mastery

Reflection
Below are examples of shapes that have been reflected on the mirror line.
Which is the odd one out and why? Discuss with your Learning Partner.

This is the odd one out. The trapezium has not been reflected; it has been translated.
Jack is reflecting a triangle in two perpendicular mirror lines.

Where has he made a mistake? What should this triangle look like? Draw on your white board.

The highlighted triangle was incorrect.

It should look like this if it has been reflected correctly.
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Reflection
Jermaine wants to reflect the blue rectangle in the mirror line.

Draw the reflected shape.
How could you reflect the shape if you didn’t have a mirror to hand?
Discuss with your Learning Partner.

You could focus on one vertex at a time, counting the distance from the mirror line and repeating this distance across the mirror line, plotting the points as you go to show the reflected shape.
Looking at a vertex of the original rectangle alongside the reflected vertex, what do you notice?

When reflecting a shape in a horizontal mirror line that passes through the y-axis, the x coordinate is the same but the y coordinate changes.
Reflection
Describe the translations of the fruit (A) in each grid to their new positions (B).

1. 3 left & 1 down
2. 3 right & 1 down
3. 1 left & 3 down
Translate these shapes to their new position.

2 left
2 up

3 right
1 down

3 left
3 up
Samira has not done this correctly. A translated shape must be exactly the same size. It should be congruent to the original.

Samira has translated shape A 2 right, 3 up. Has she done this correctly?
The square, triangle and rectangle have been translated to make a picture of a church. How was each shape translated?

- Square: 2 right, 5 down
- Rectangle: 8 right, 4 down
- Triangle: 8 right, 4 up