

Lesson 4

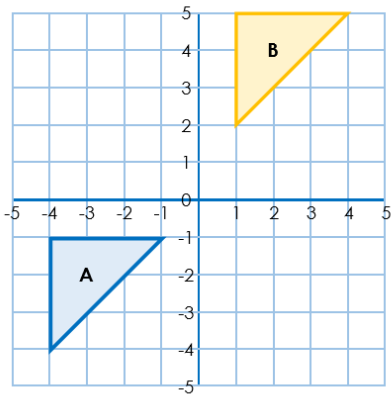
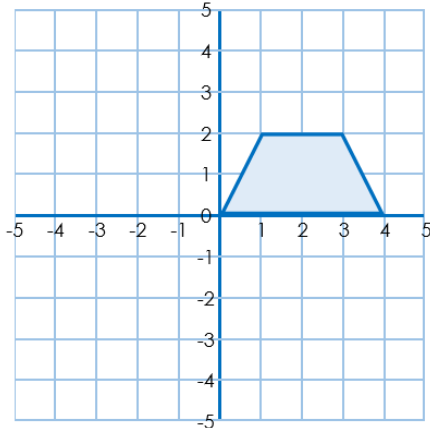
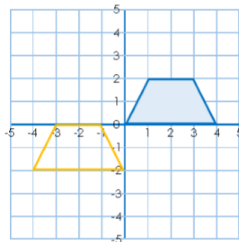
L.O I am learning to translate shapes across four quadrants.

All	All of you must complete the fluency section.
Most	Most of you will complete the fluency and reasoning sections.
Some	Some of you will complete the fluency, reasoning, and problem-solving sections.

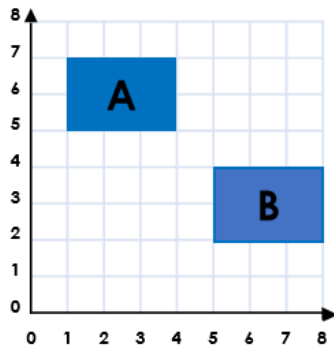
Try your best – it is all we can ask for! 😊

This video may help if you are stuck at any point:

Fluency

	Your answer
<p>1.</p> <p>Shape A has been translated to the position of shape B.</p> <p>A has translated ___ units to the ___ and ___ units ___.</p> 	<p>A has translated 5 units to the right and 6 units up.</p>
<p>2.</p> <p>The trapezium has been translated 4 units right and 2 units up.</p> <p>Write the shape's original coordinates.</p> <p>Use the grid to help you.</p> 	 <p>The shape's original coordinates were: (-3, 0), (-1, 0), (-4, -2), (0, -2).</p>

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



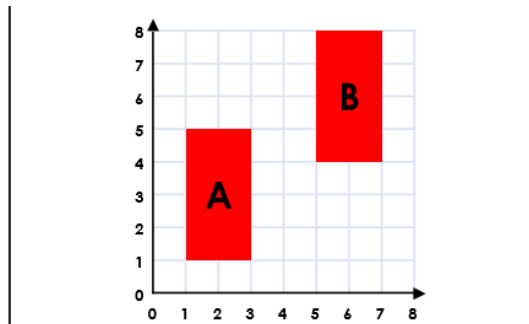
The shape has moved squares to the right and squares down.



VF

4,3

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



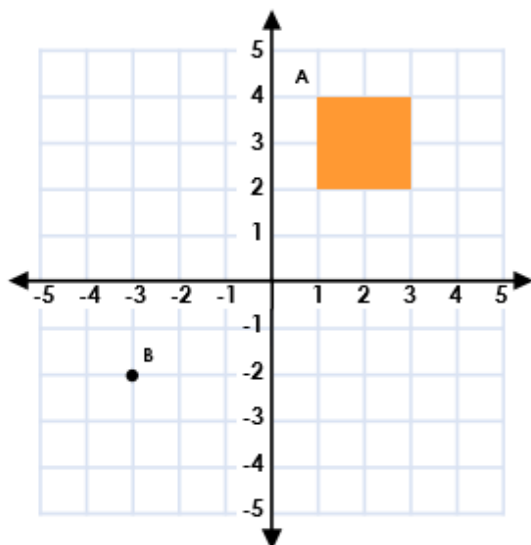
The shape has moved squares to the right and squares up.



VF

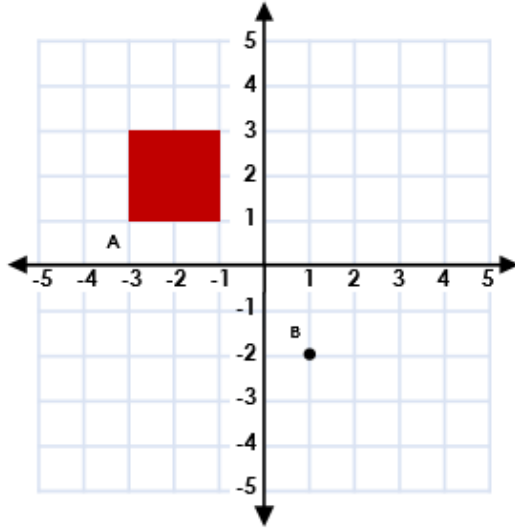
4,3

5. This shape is translated so that point A moves to point B. Write down the coordinates of the shape in its new position.



$(-3, -2)$, $(-3, -4)$, $(-1, -4)$, $(-1, -2)$

6. This shape is translated so that point A moves to point B. Write down the coordinates of the shape in its new position.



(1, -2), (3, -2), (1, 0), (3, 0)

Reasoning and Problem Solving

Your answer

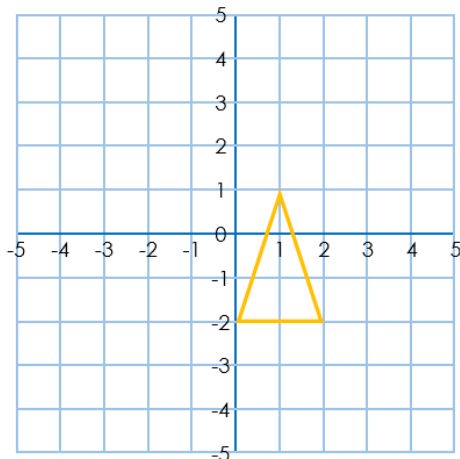
REASONING 1

Anita translated her shape 3 units left and 1 unit down.



My original coordinates were $(-3, -3)$, $(-1, -3)$ and $(-2, 0)$.

Is she correct? Prove it!



Reasoning 1

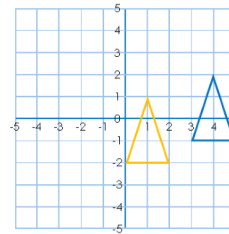
Pupil responses should show that Anita is not correct.

Modelled DAB Reasoning Responses

D – Anita is not correct.

A – She has translated her shape the same way again instead of reversing the steps she took.

B – Her original coordinates were: $(3, -1)$, $(5, -1)$ and $(4, 2)$.



2.

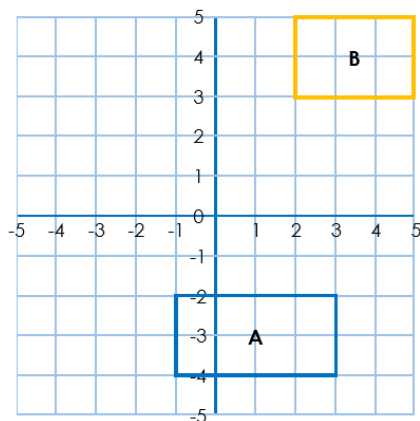
REASONING 2

Caleb translated shape A to the position of shape B.



I translated the shape 2 units right and 7 units up.

Has he done this correctly? Convince me.

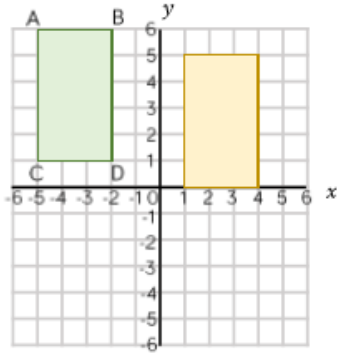


Pupil responses should show that Caleb has not translated the shape correctly. Modelled DAB Reasoning Response **D** – Caleb has not translated the shape correctly. **A** – He has not translated 2 of the points properly and his translated shape is smaller than his starting shape. **B** – Caleb has translated the starting coordinates $(3, -2)$ and $(3, -4)$ correctly to $(5, 5)$ and $(5, 3)$. He has not translated the coordinates $(-1, -2)$ and $(-1, -4)$ correctly as he has translated these 3 units right instead of 2. After the translation, these coordinates should have been $(1, 5)$ and $(1, 3)$.

3.

True or False?

Dexter has translated the rectangle ABCD 6 units down and 1 unit to the right to get to the yellow rectangle.



Explain your reasoning.

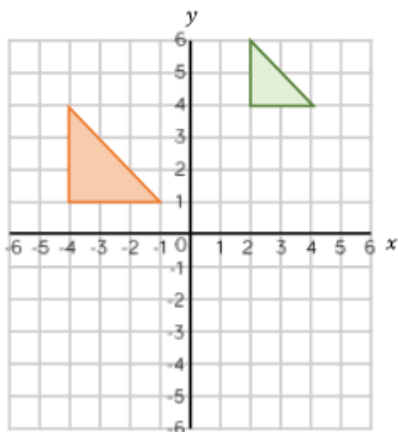
False.

The translation is 6 units to the right and 1 unit down.

4.

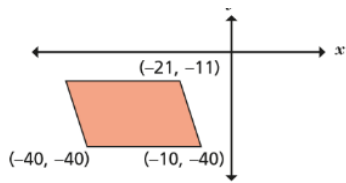
Spot the Mistake.

The green triangle has been translated 6 units to the left and 3 units down.



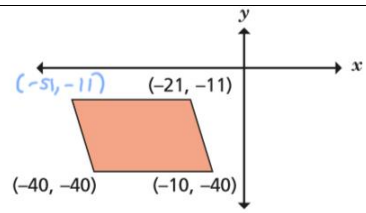
The triangle has changed size. When a shape is translated its size does not change.

Extension



This parallelogram has been translated 50 left and 25 down.

What were the coordinates of **all four** vertices before it was translated?



This parallelogram has been translated 50 left and 25 down.

What were the coordinates of **all four** vertices before it was translated?

$(-1, 14)$ $(29, 14)$ $(10, -15)$ $(40, -15)$