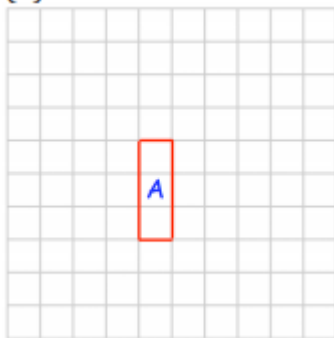


28.01.21

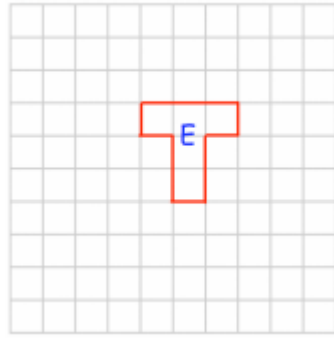
LO: I can solve a range of problems involving reflection and translation

Work through the problems below, identifying what you are asked to do before completing.

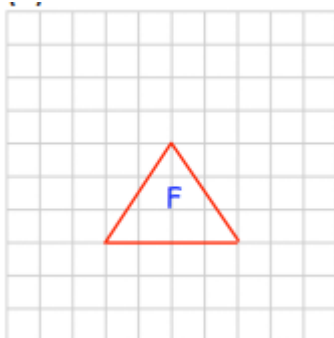
1. Translate the shape through (3,4)



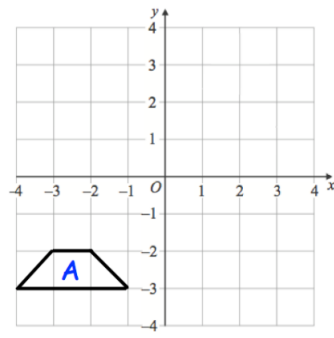
2. Translate the shape through (3,3)



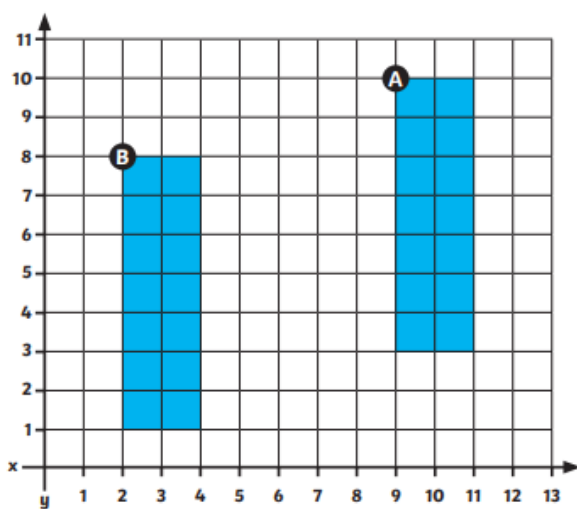
3. Translate this shape through (2,3)



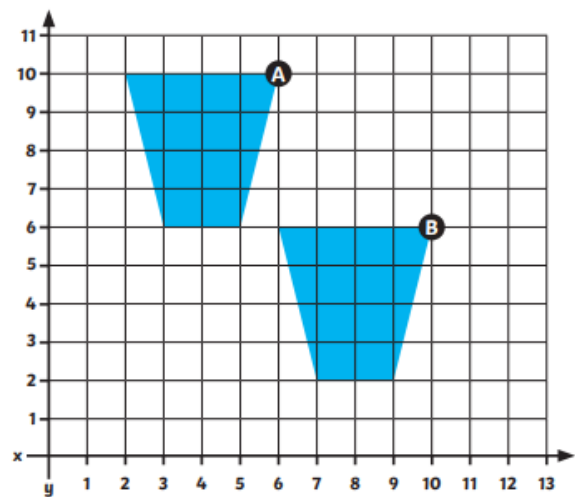
4. Translate trapezium A by vector (4,3)



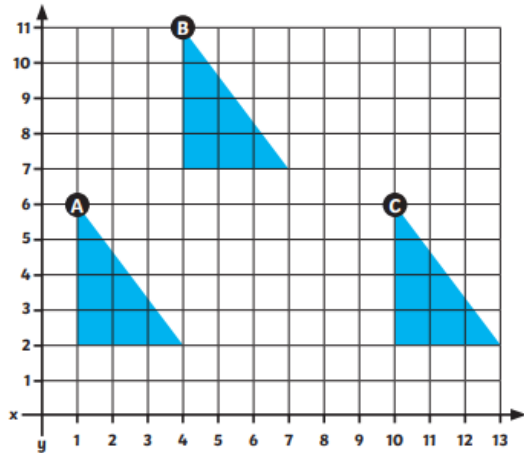
5. How has the shape been translated from A to B?



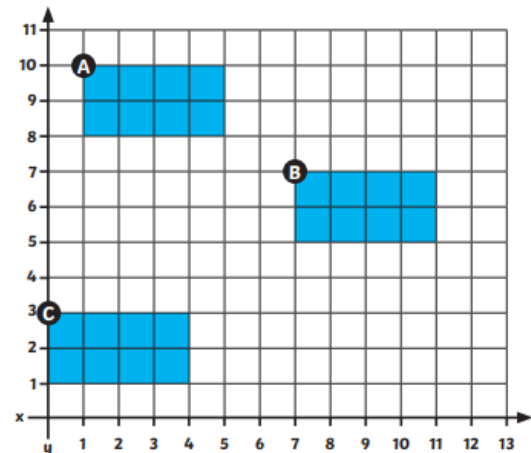
6. How has the shape been translated from B to A? What are its new co-ordinates?



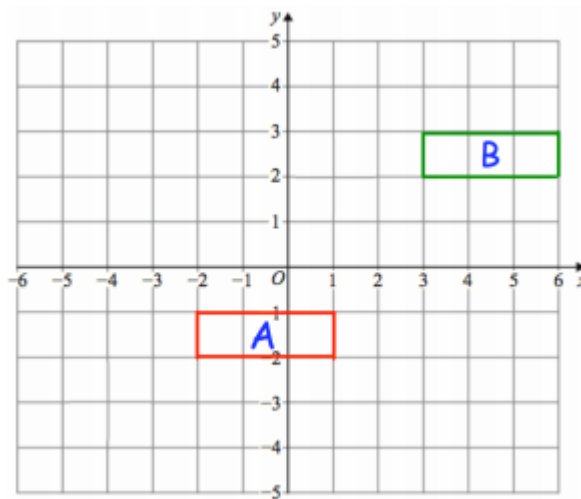
7. Write down the translations for shape A to shape B and then from B to C. Write down the coordinates for each shape A, B and C.



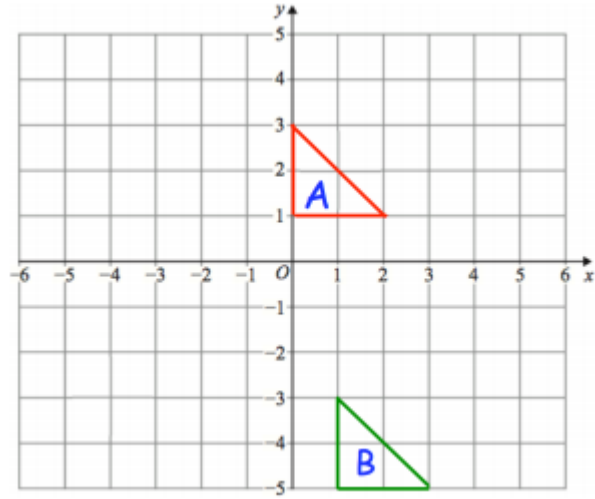
8. Write down the translations for shape C to shape A and then from A to B. Write down the coordinates for each shape A, B and C.



10. What is the complete translation performed taking A to B?



11. What is the complete translation performed taking B to A?



12.

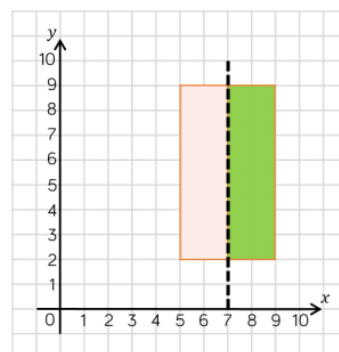


Dora

When you reflect a shape, its dimensions change.

Do you agree with Dora?  
Explain your thinking.

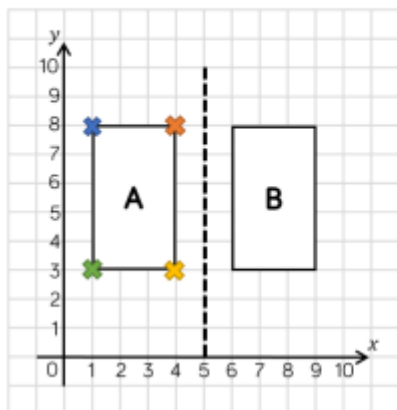
13.



The rectangle is pink and green.  
The rectangle is reflected in the mirror line.  
What would its reflection look like?

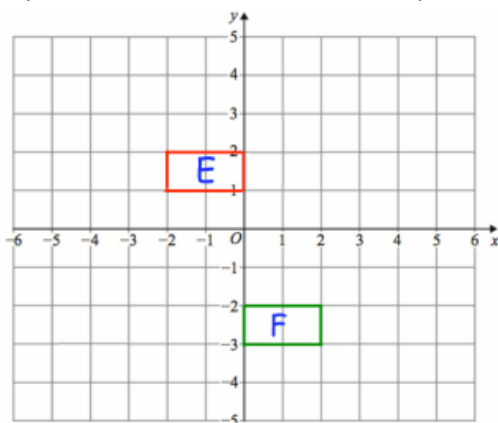
14.

Object A is reflected in the mirror line to give image B.  
Write the coordinates of the vertices for each shape.

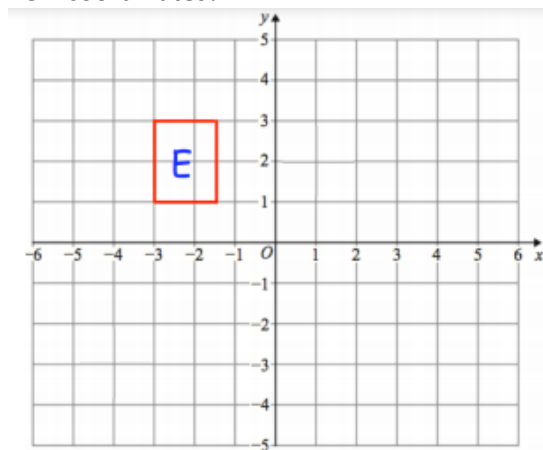


	Original Coordinate	Reflected Coordinate

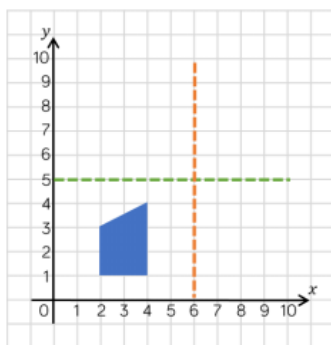
15. Andrew has been asked to translate shape E by  $(-4, 2)$ . He has drawn shape F. Has he made any mistakes and if so what are they?



16. Translate this shape by  $(4.5, -4)$ . What are its new coordinates?



17.

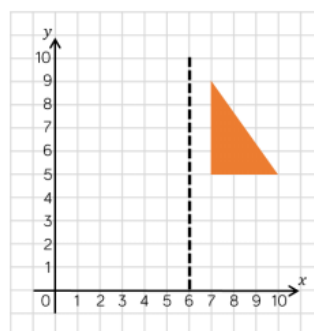


This is a shape after it has been reflected.  
This is called the image.

Use the grid and the marked mirror lines  
to show where the original object was  
positioned.

Is there more than one possibility?

18.



Eva reflects the shape in the mirror line.  
She thinks that the coordinates of the  
vertices for the reflected shape are:

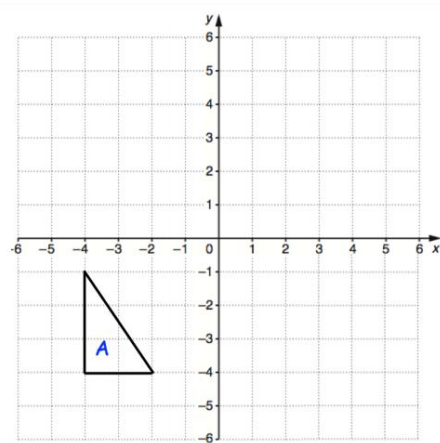
(5, 5)

(2, 5)

(2, 9)

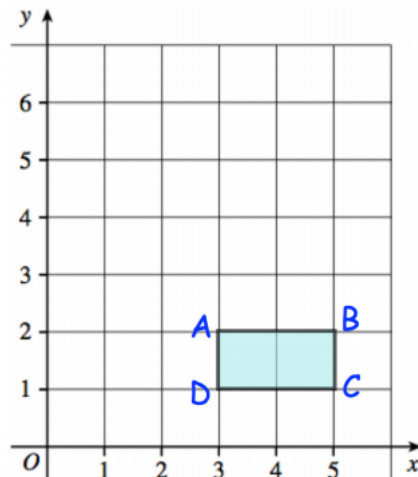
Is Eva is correct?  
Explain why.

19.



Reflect triangle A in the x-axis.

20.



Reflect the rectangle in the line  $y = x$ .

21.

Match the translations.



	to	
	to	
	to	

4 right, 2 down

2 left, 3 up

5 left, 5 down

22.

Translate the coordinates below.

(3, 6)	3 left	( , )	1 up	( , )
(5, 7)	2 right	( , )	4 down	( , )