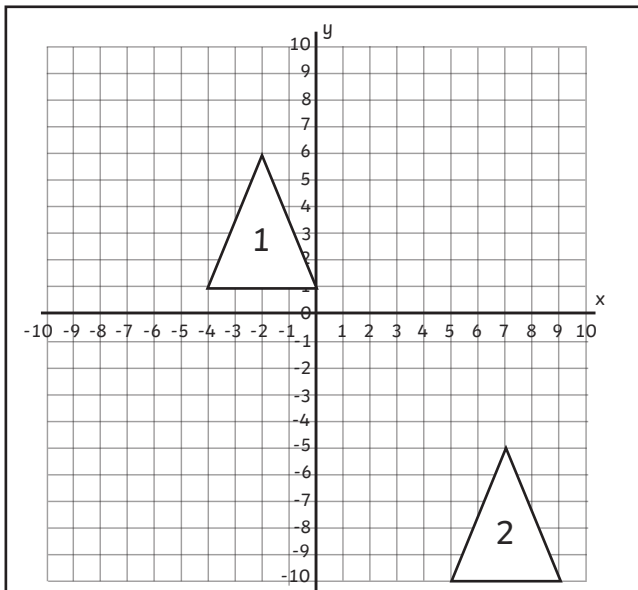


# 2D Shape Translations

I can describe the translation of a 2D shape on a four-quadrant co-ordinate grid.

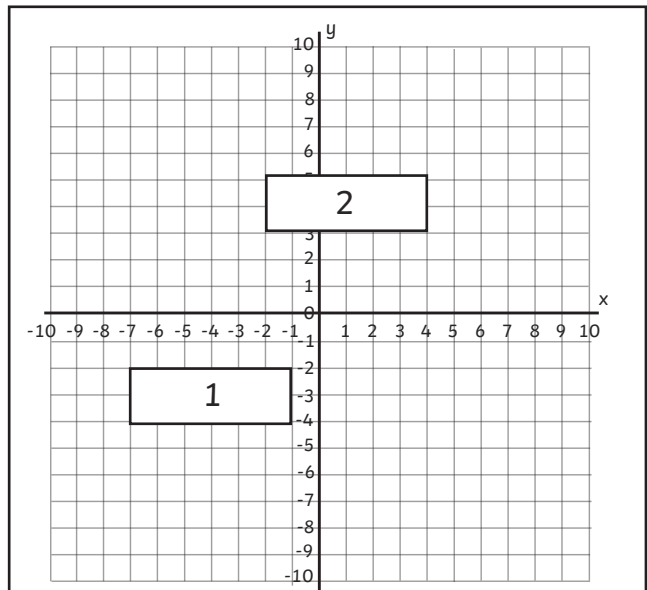
Describe the positions and translations of the 2D shapes.



Starting co-ordinates:

Translation:

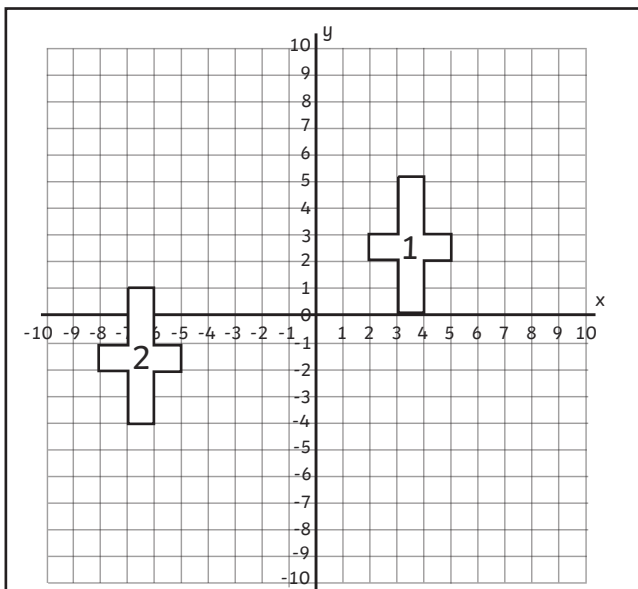
Finishing co-ordinates:



Starting co-ordinates:

Translation:

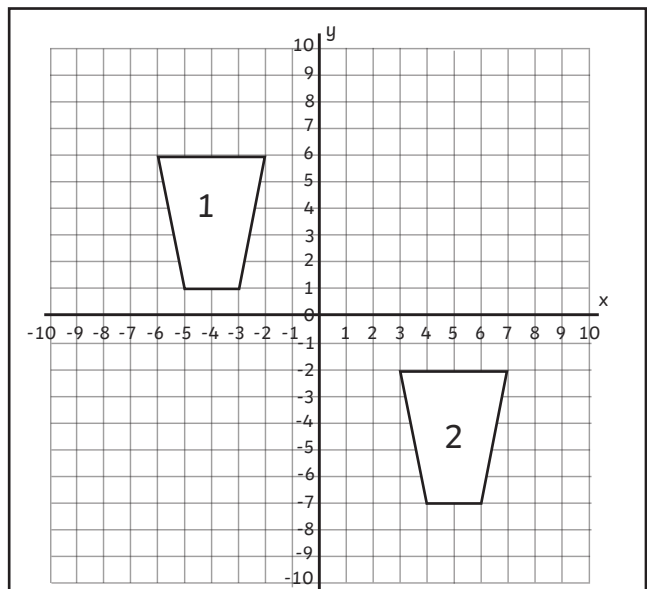
Finishing co-ordinates:



Starting co-ordinates:

Translation:

Finishing co-ordinates:



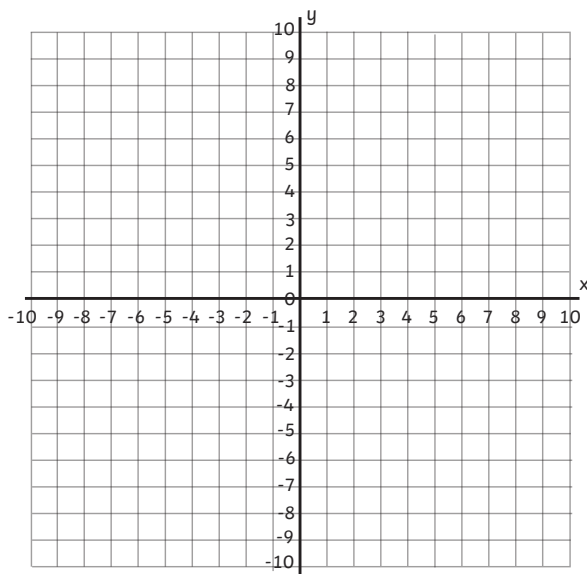
Starting co-ordinates:

Translation:

Finishing co-ordinates:

Plot the following co-ordinates and following the translations to reveal a new shape.

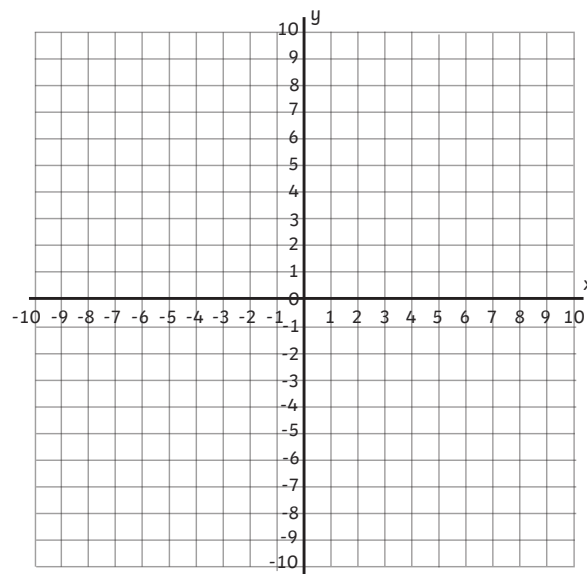
Plot these co-ordinates to reveal a shape:  $(-8, -5)$ ,  $(-4, -5)$ ,  $(-4, -3)$ ,  $(-6, -3)$ ,  $(-6, 3)$ ,  $(-8, 3)$



Translate the shape right 3, down 2.

What are the co-ordinates of the new shape?

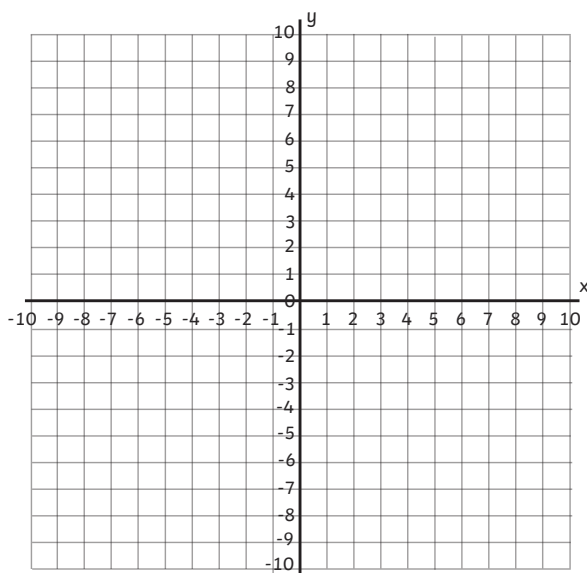
Plot these co-ordinates to reveal a shape:  $(-2, -6)$ ,  $(-5, -2)$ ,  $(-8, -6)$ ,  $(-5, -10)$



Translate the shape right 6, up 9.

What are the co-ordinates of the new shape?

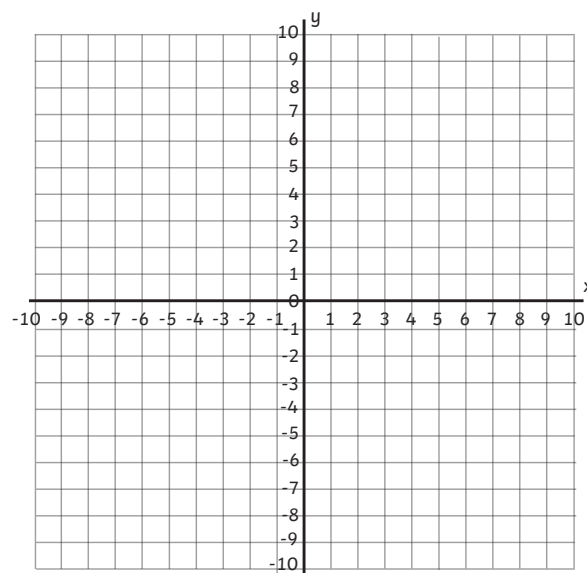
Plot these co-ordinates to reveal a shape:  $(5, 3)$ ,  $(8, 3)$ ,  $(9, 5)$ ,  $(8, 7)$ ,  $(5, 7)$ ,  $(4, 5)$



Translate the shape left 9, down 5.

What are the co-ordinates of the new shape?

Plot these co-ordinates to reveal a shape:  $(-3, -1)$ ,  $(-5, 2)$ ,  $(-7, 5)$ ,  $(-3, 5)$ ,  $(-7, -1)$



Translate the shape left 3, up 5.

What are the co-ordinates of the new shape?

# 2D Shape Translations Answers

Describe the positions and translations of the 2D shapes.

Starting co-ordinates:  $(-4,1)$ ,  $(0,1)$ ,  $(-2,6)$

Translation: **Right 9, down 11**

Finishing co-ordinates:  
 $(5,-10)$ ,  $(9,-10)$ ,  $(7,-5)$

Starting co-ordinates:  
 $(-7,-4)$ ,  $(-1,-4)$ ,  $(-1,-2)$ ,  $(-7,-2)$

Translation: **Right 5, up 7**

Finishing co-ordinates:  
 $(-2,3)$ ,  $(4,3)$ ,  $(4,5)$ ,  $(-2,5)$

Starting co-ordinates:  $(3,0)$ ,  $(4,0)$ ,  $(4,2)$ ,  
 $(5,2)$ ,  $(5,3)$ ,  $(4,3)$ ,  $(4,5)$ ,  $(3,5)$ ,  $(3,3)$ ,  
 $(2,3)$ ,  $(2,2)$ ,  $(3,2)$

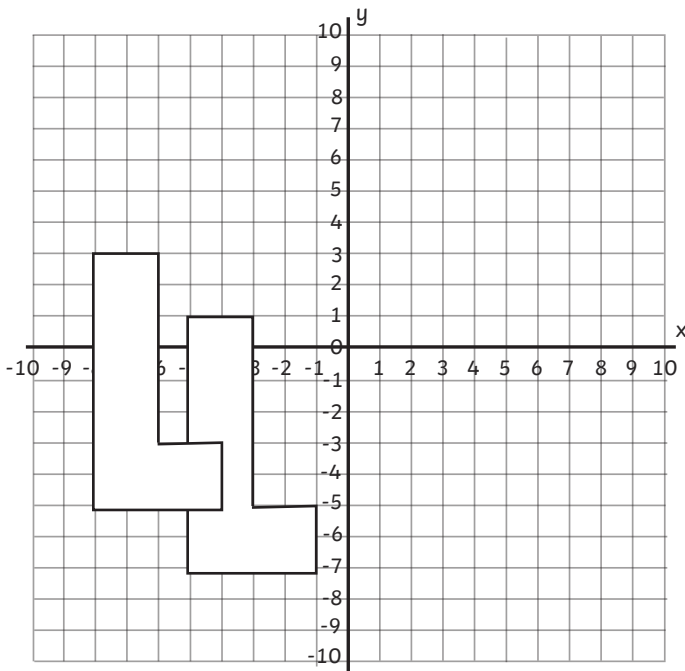
Translation: **Left 10, down 4**

Finishing co-ordinates:  $(-7,-4)$ ,  $(-6,-4)$ ,  
 $(-6,-2)$ ,  $(-5,-2)$ ,  $(-5,-1)$ ,  $(-6,-1)$ ,  $(-6,1)$ ,  
 $(-7,1)$ ,  $(-7,-1)$ ,  $(-8,-1)$ ,  $(-8,-2)$ ,  $(-7,-2)$

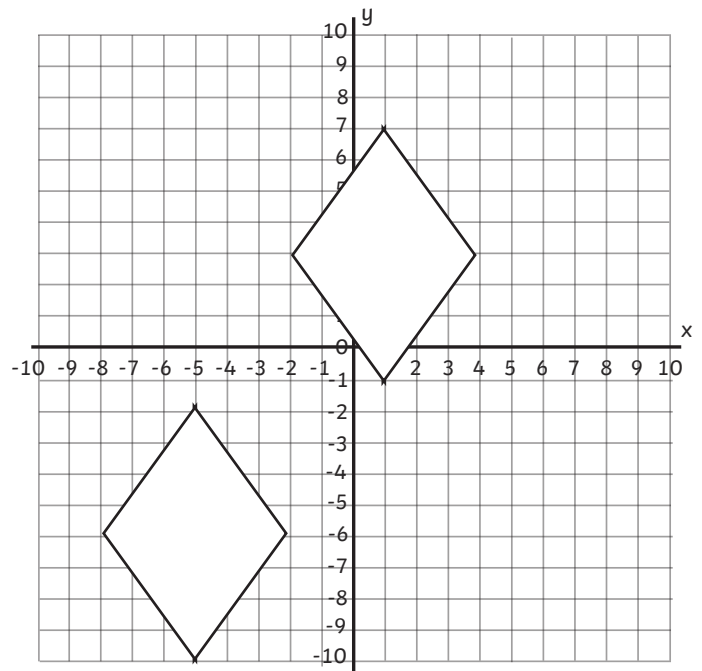
Starting co-ordinates:  
 $(-5,1)$ ,  $(-3,1)$ ,  $(-2,6)$ ,  $(-6,6)$ ,

Translation: **Right 9, down 8**

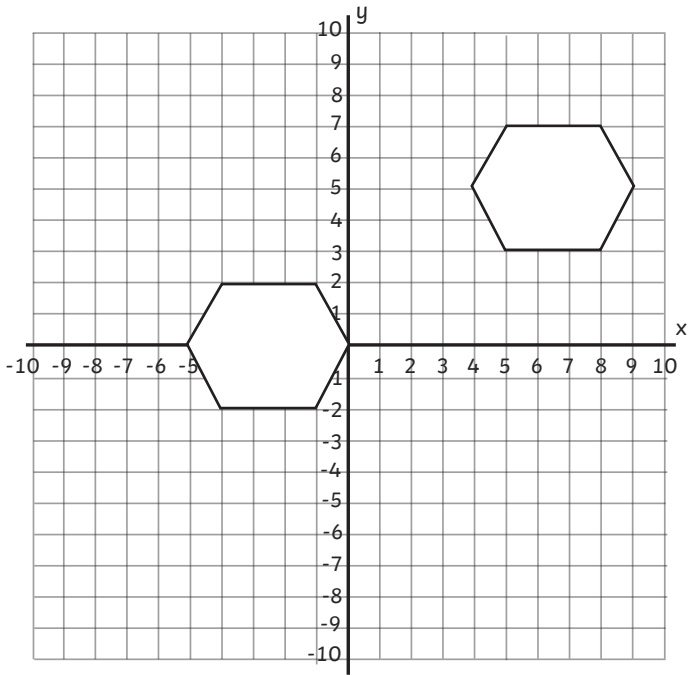
Finishing co-ordinates:  
 $(4,-7)$ ,  $(6,-7)$ ,  $(7,-2)$ ,  $(3,-2)$



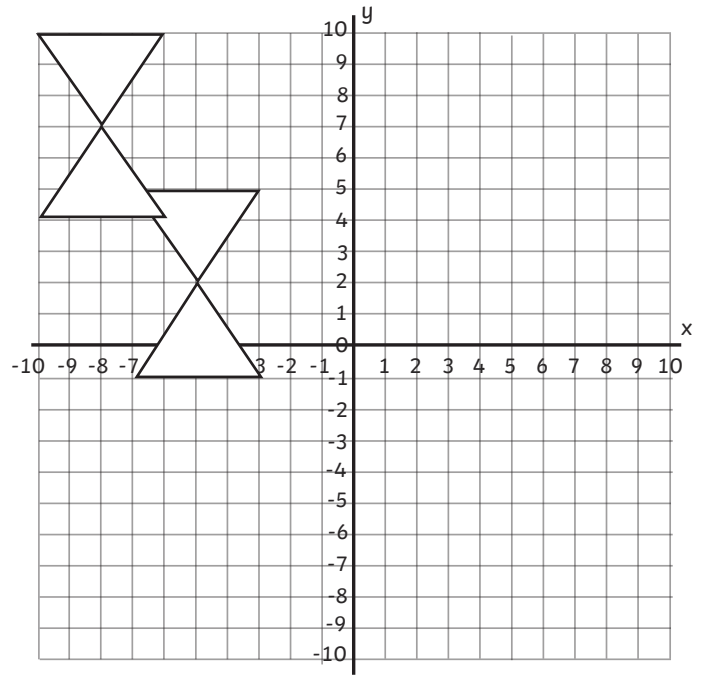
What are the co-ordinates of the new shape?  
 $(-5,-7)$ ,  $(-1,-7)$ ,  $(-1,-5)$ ,  $(-3,-5)$ ,  
 $(-3,1)$ ,  $(-5,1)$



What are the co-ordinates of the new shape?  
 $(4,3)$ ,  $(1,7)$ ,  $(-2,3)$ ,  $(1,-1)$



What are the co-ordinates of the new shape?  
 **$(-4, -2)$ ,  $(-1, -2)$ ,  $(0, 0)$ ,  $(-1, 2)$ ,  $(-4, 2)$ ,  $(-5, 0)$**



What are the co-ordinates of the new shape?  
 **$(-6, 4)$ ,  $(-8, 7)$ ,  $(-10, 10)$ ,  $(-6, 10)$ ,  $(-10, 4)$**