CVPS Home Learning
WC: 04.05.20
Please write all answers / questions in your distance/home learning journals. Remember to email your work to your class teacher.

YEAR 5 Mathematics

Click on the lesson you would like to complete today.

LESSON 1
LESSON 2
LESSON 3
LESSON 4
LESSON 5

This week we are learning about reflections. We will build upon what we learnt last week involving grids and coordinates and find links between the two later in the week.

Word of the day: reflection

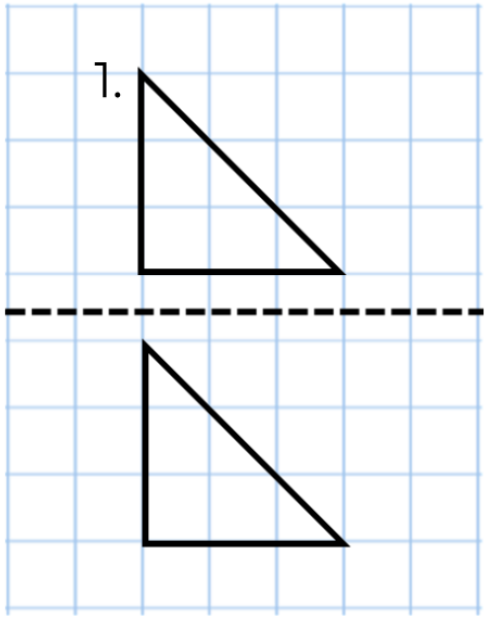
Lesson 1: To identify and describe reflections

- In this lesson, we will be learning about reflections. We will be understanding what mathematical reflections are and will learn what a line of reflection is. By the end of this lesson, you will be able to identify how a shape has been reflected.
- Click here and complete the pre lesson quiz and follow the instructions on the screen.
- You will find a copy of the independent task, as referred to in the video, and additional challenges.

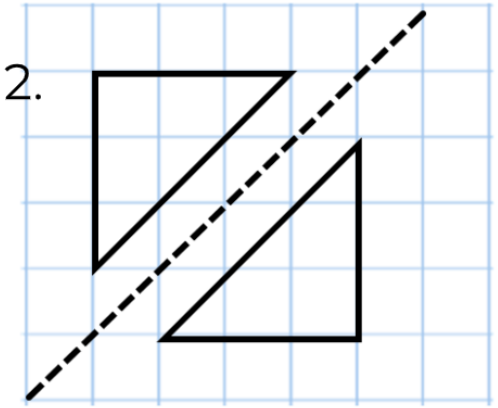
Independent Task

Task 1: Which of these shapes have been correctly reflected?

1.



2.



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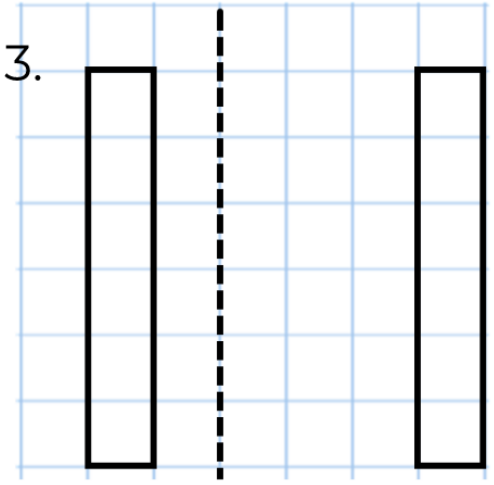
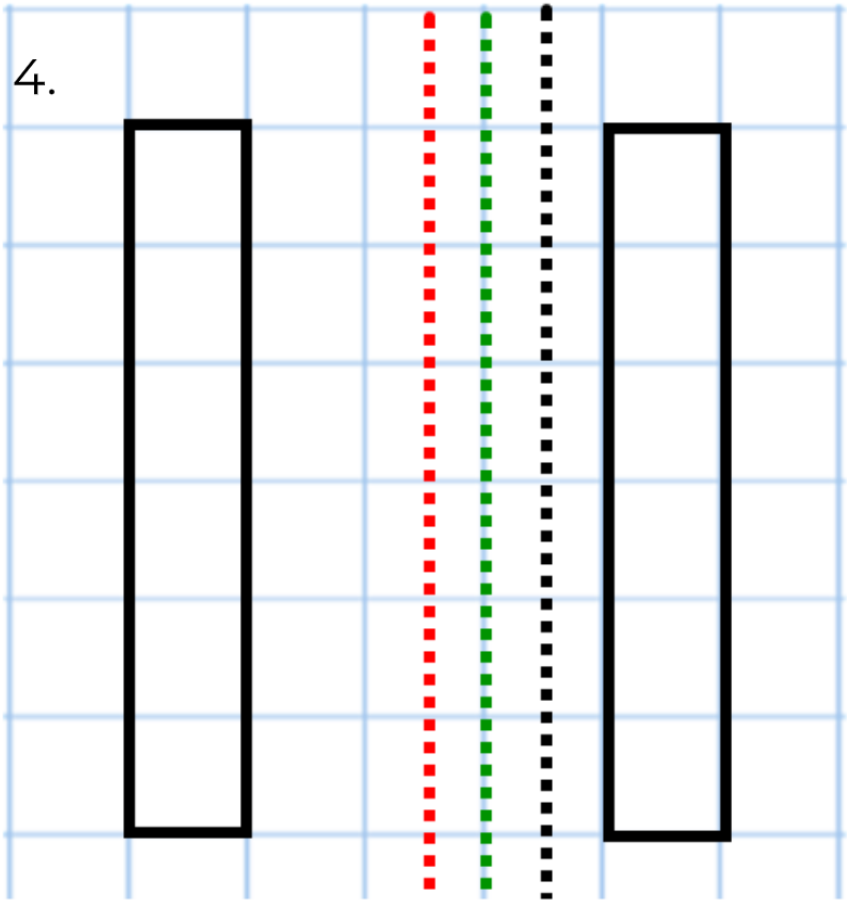
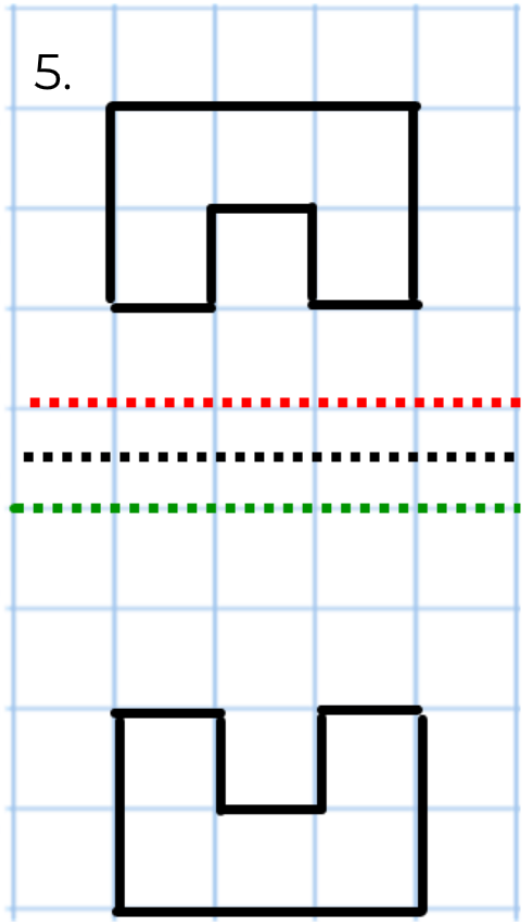


Task 2: Choose the right coloured line to show the reflection.

4.

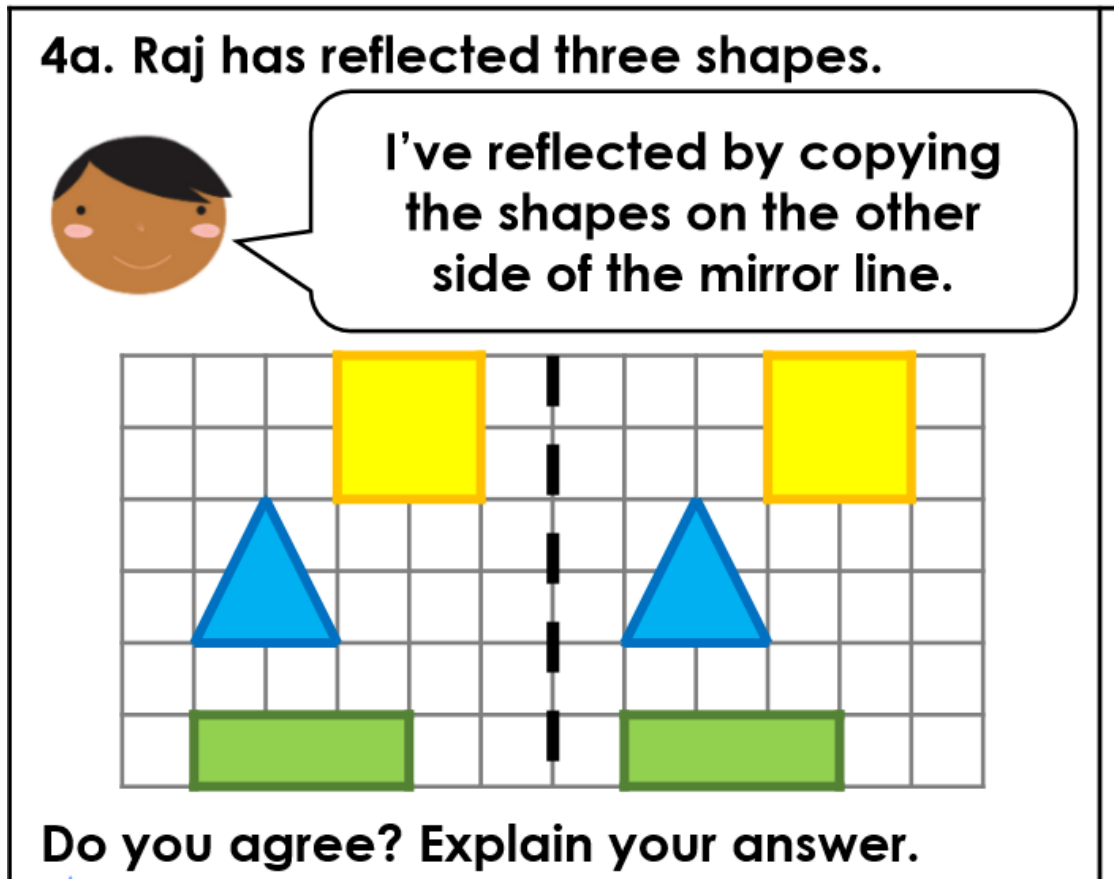


5.

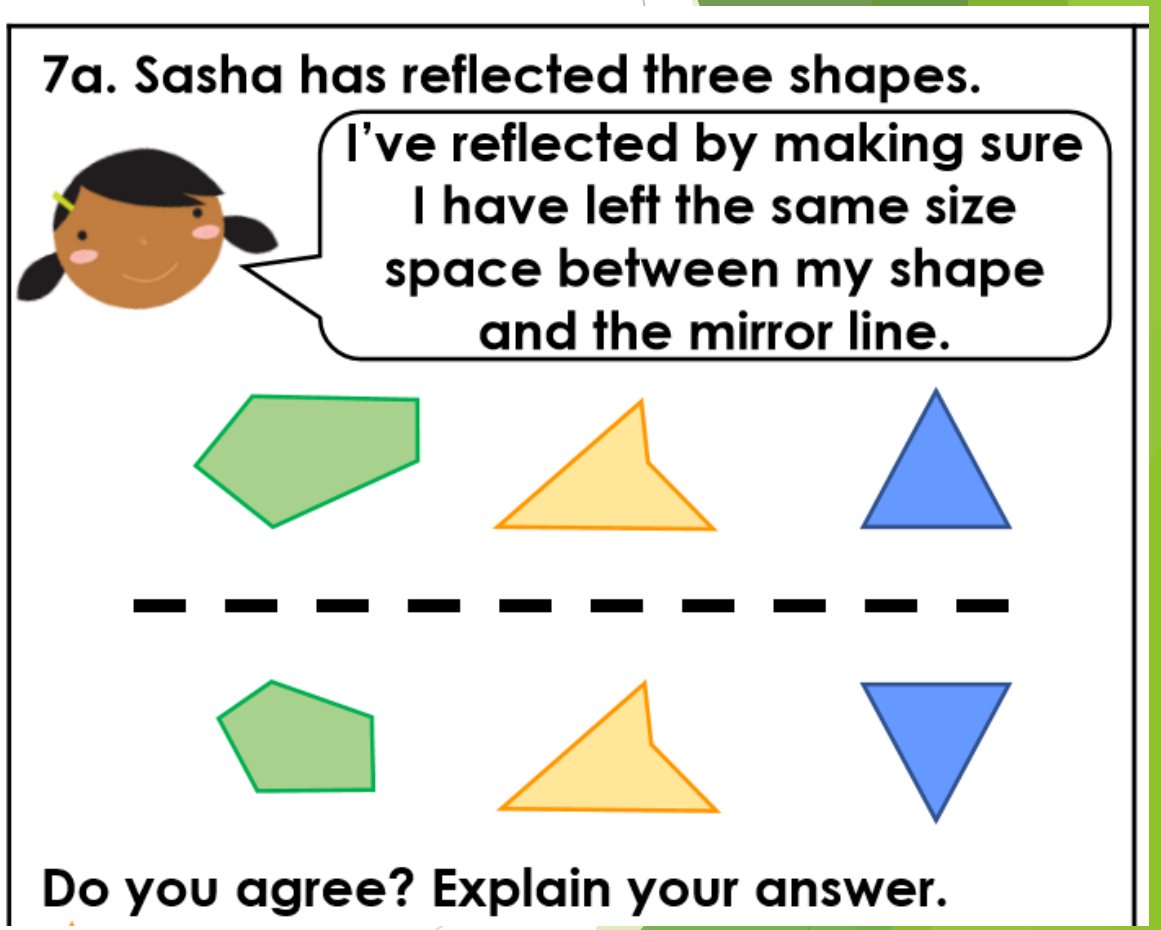


Lesson 1: Challenge

a)



b)



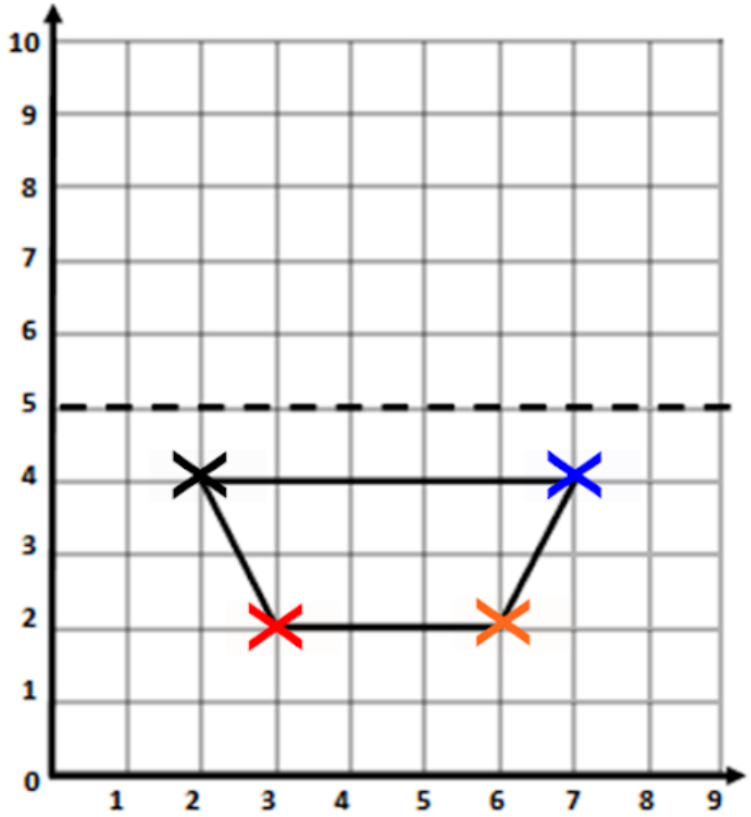
Word of the day: coordinates

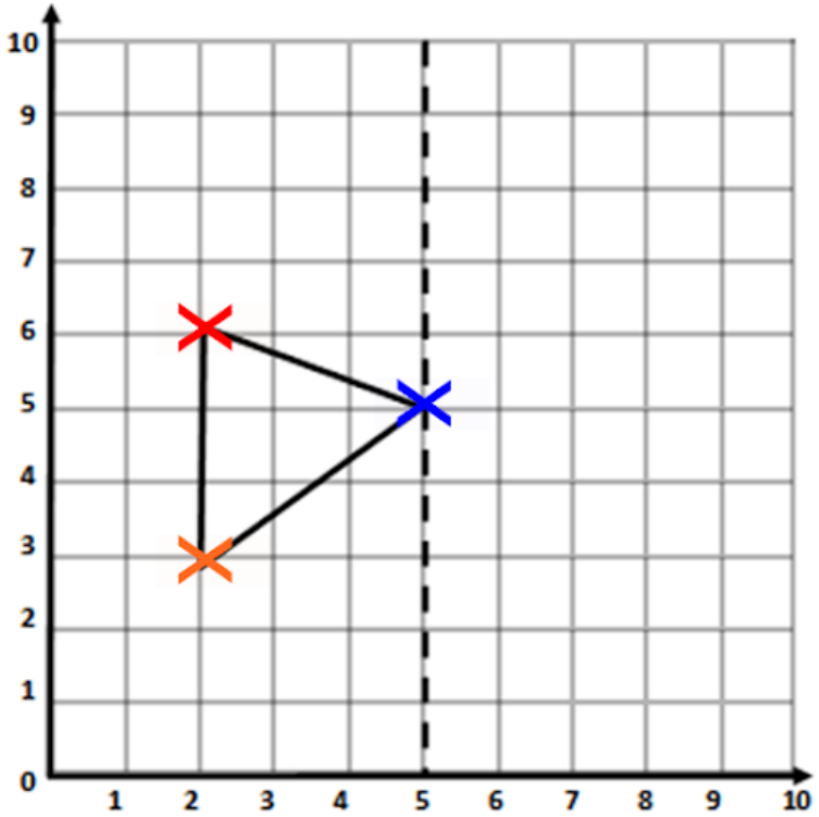
Lesson 2: To describe reflections using coordinates

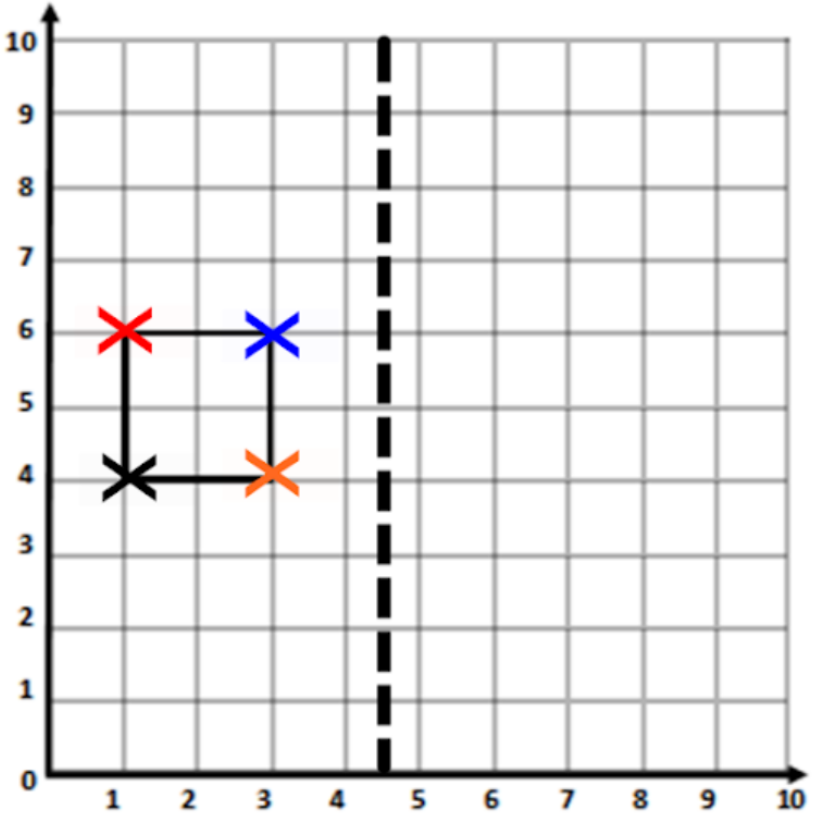
- In the second lesson of the week, we will continue to explore reflections. We will be focusing on reflecting a shape along a line of reflection and using coordinates to describe the shape. You will also have an opportunity to reason about how and why reflections work.
- Click here and complete the pre lesson quiz and follow the instructions on the screen.
- You will find a copy of the independent task, as referred to in the video, and additional challenges.

Independent Task

Using the line of reflection, write the coordinates for the original shape and then work out the coordinates for the reflection.





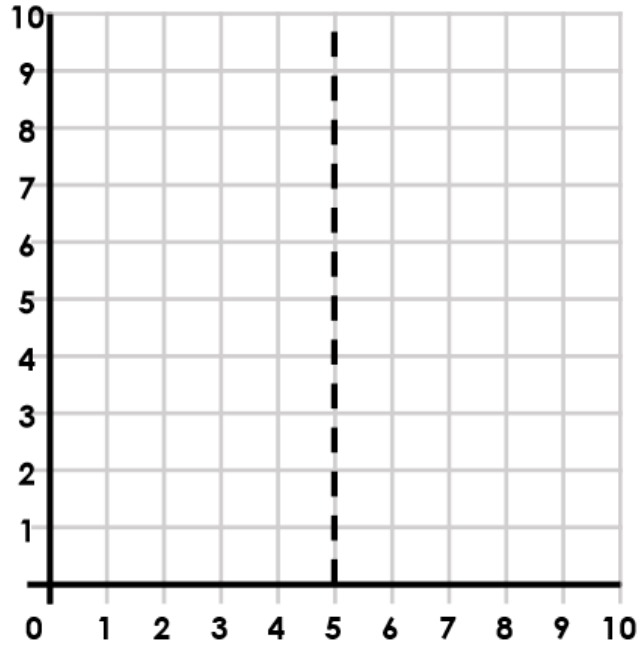


Lesson 2: Challenge

a)

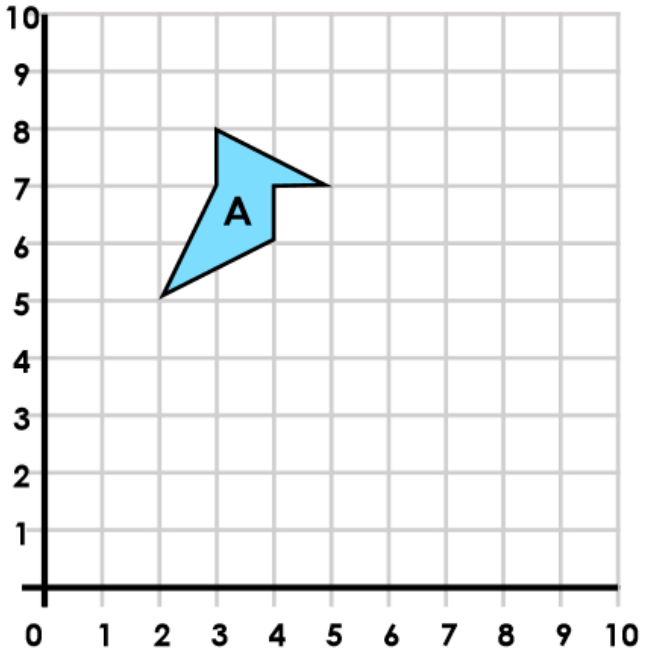
5a. Plot these coordinates and join them in order. Reflect it. What have you drawn?

(5, 9)
(4, 6)
(1, 6)
(3, 4)
(2, 1)
(5, 3)



b)

6b. Luca says it is impossible to reflect this shape with a coordinate of (10, 5).



Do you agree? Prove it.

Word of the day: vertex

Lesson 3: Describing positions and coordinates

- In the third lesson of the week, we will be returning to a four-quadrant grid. We will be using the X and Y axes as lines of reflection and using coordinates to describe the reflection that has taken place. In addition, we will also be creating rules to help us reflect shapes more easily.
- Click here and complete the pre lesson quiz and follow the instructions on the screen.
- You will find a copy of the independent task, as referred to in the video, and additional challenges.

Independent Task

Task 1

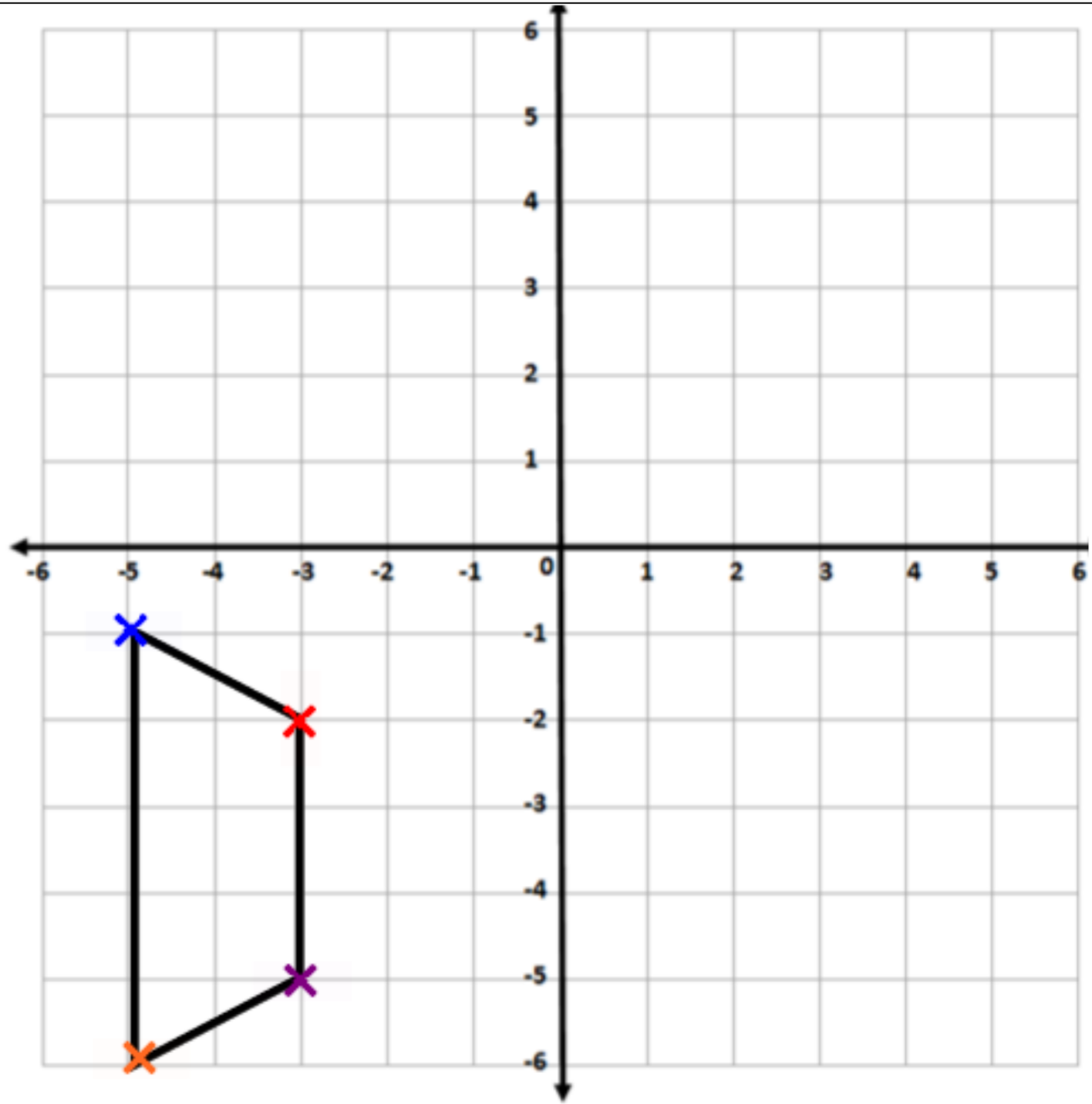
Reflect one vertex along the **Y axis** and work out the coordinates for the rest of the trapezium reflection.

Task 2

Reflect one vertex along the **X axis** and work out the coordinates for the rest of the trapezium reflection.

Task 3

What patterns can you see in the coordinates?

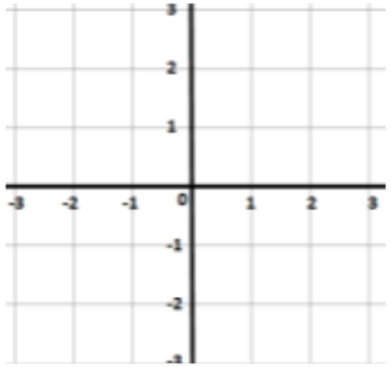


Word of the day: axis

Lesson 4: To reason about reflection

- In the penultimate lesson of this unit, we will continue our study of reflections. Yesterday, we worked on creating generalisations about reflections along the X and Y axes and today we will be using those generalisations to reflect shapes using just one coordinate.
- Click here and complete the pre lesson quiz and follow the instructions on the screen.
- You will find a copy of the independent task, as referred to in the video, and additional challenges.

Independent Task



Task 1

A rectangle has vertices in the following positions. It is reflected in the **y-axis**. What are its new coordinates?

Original	Reflected
(-4, 2)	(___ , ___)
(-4, 1)	(___ , ___)
(-1, 2)	(___ , ___)
(-1, 1)	(___ , ___)

Task 2

A triangle has vertices in the following positions. It is reflected in the **x-axis**.

Original	Reflected
(0, -3)	(___ , ___)
(-1, -5)	(___ , ___)
(__ , __)	(___ , ___)

Task 3

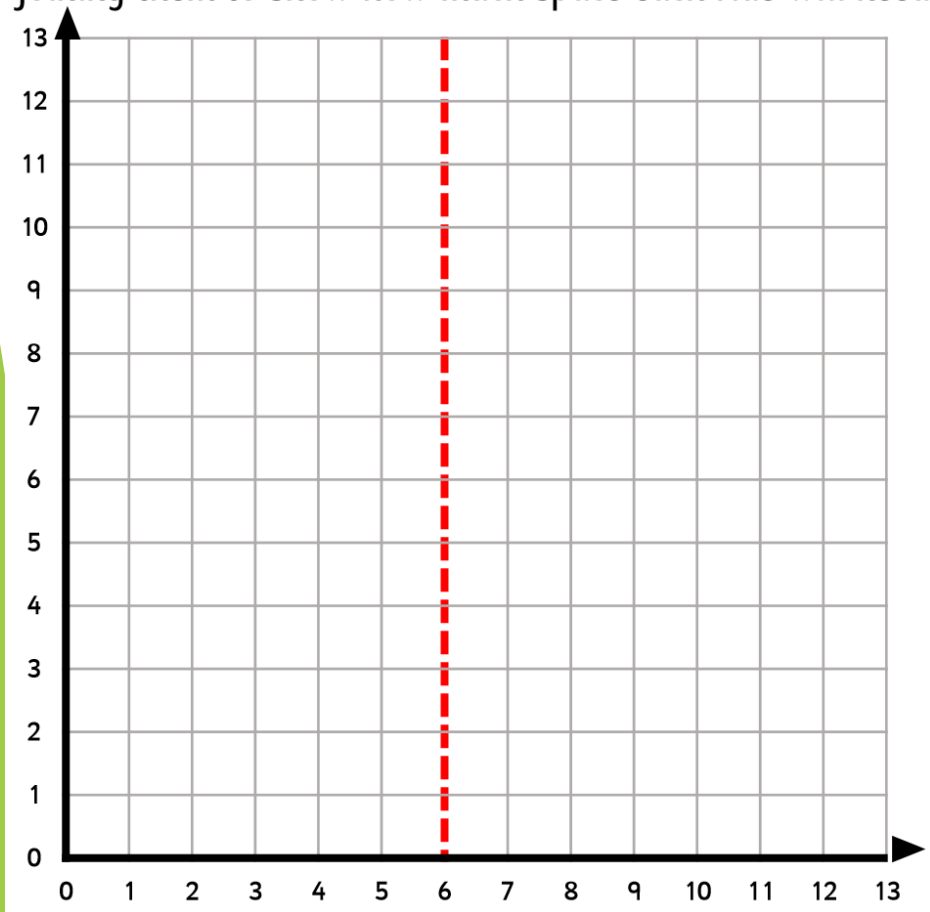
A square has been reflected along the X axis. What is missing?

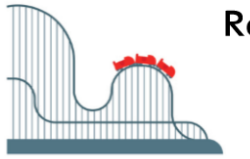
Original	Reflected
(-5, 😊	(-5, 1)
(-5, -3)	(😊 3)
(-3, -3)	(-3, 3)
(😊 -1)	(-3, 1)

Lesson 4 - Challenge

Mr Moneybags of WonderWorld Theme Park is installing some new rides in his park and the building deadline is coming up fast. Help him make some important decisions before the inspector arrives at the end of the week – if the extension doesn't pass the inspection, the whole park will be torn down!

1. Mr Moneybags wants all these rides to be on the left side of the park. Plan how you will arrange the rides at the park by plotting each four pairs of coordinates and joining them to show how much space each ride will need.





Roller Coaster
(1,7) (1,9)
(6,9) (6,7)

Ferris Wheel
(1,10) (1,12)
(5,12) (5,10)

Tilt-a-Whirl
(4,0) (4,3)
(6,3) (6,0)

Carousel
(1,2) (1,4)
(3,4) (3,2)

Questions

1) Which ride will take up the most space?
2) Which ride will take up the least space?

As the crew prepare to install the rides, Mr Moneybags cries, "I have changed my mind! Left is wrong, and right is right! Put the rides on the other side!" The crew scrambles to follow his order.

3) Reflect the rides over the red line on the graph. Draw their new locations.

Word of the day: translation

Lesson 5: To make links between reflections and translations.

- Well done for making it to the last lesson of our unit on transformations. For this last lesson we will be bringing everything we have learnt over the last ten lessons. We will be focusing on translations from lessons 1-5 and reflections from lessons 6-10. We will be looking at the similarities and differences between reflections and translations and applying our knowledge of both to complete and end of unit task.
- Click here and complete the pre lesson quiz and follow the instructions on the screen.
- You will find a copy of the independent task, as referred to in the video, and additional challenges.

Independent Task

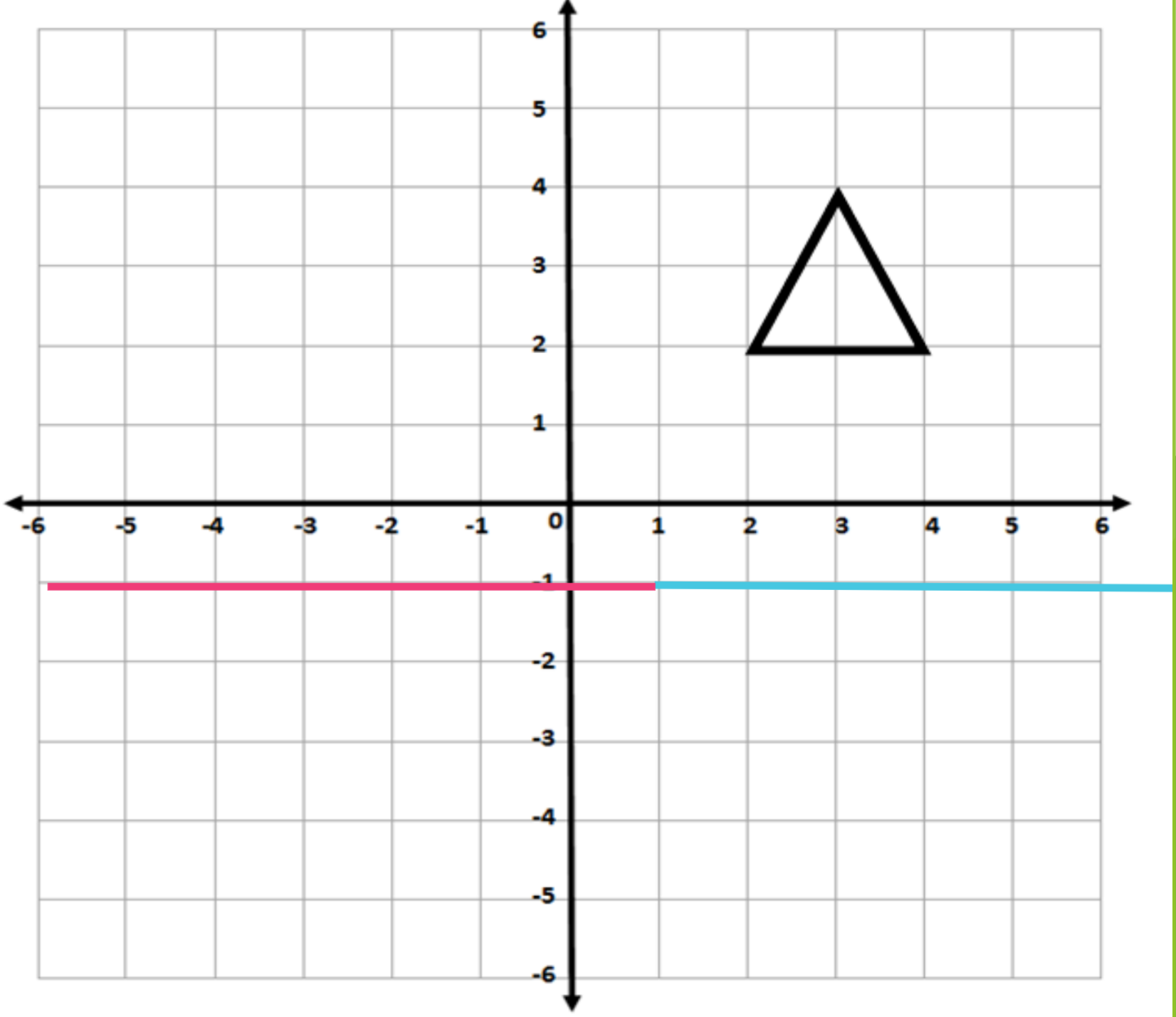
Task 1:

Part 1: Write the coordinates for the triangle.

Part 2: Reflect along the blue line and write the coordinates.

Part 3: Translate the the triangle 4 units left and write the coordinates.

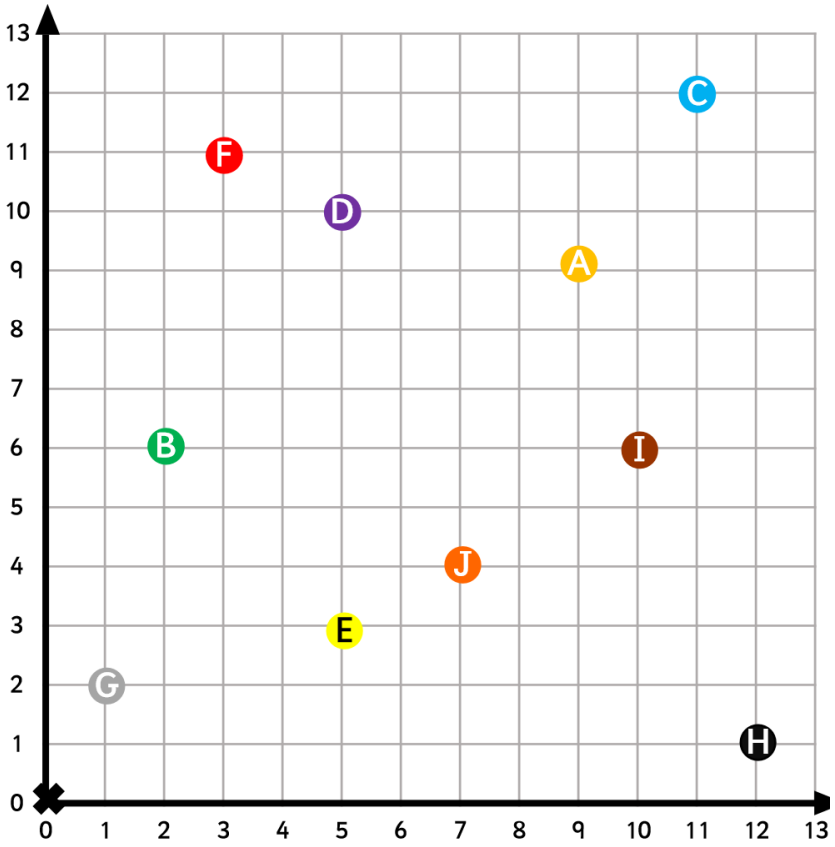
Part 4: Reflect the shape along the pink line and write the coordinates.



Lesson 5: Challenge

5. Write the directions he will have to take to move around the park and visit the rides in the following order, starting from (0,0). The first one has been done for you.

- A Roller Coaster
- B Rocket Launch
- C Ferris Wheel
- D Tilt-a-Whirl
- E Haunted House
- F Carousel
- G Ice Cream Stand
- H Steam Train Trolley
- I Hot Air Balloons
- J Climbing Palace



X to A	9 right, 9 up
A to B	
B to C	
C to D	
D to E	

E to F	
F to G	
G to H	
H to I	
I to J	