

# HELLO!

Today we are going to revise  
geometry – position and direction

# Arithmetic Warm Up

## Multiplying and dividing by 100 and 1 000

1.  $35 \times 100 =$

2.  $78.3 \times 100 =$

3.  $3\,000 \div 100 =$

4.  $6\,217 \div 1\,000 =$

# Revision on long and short multiplication and division



First we are going to revise:

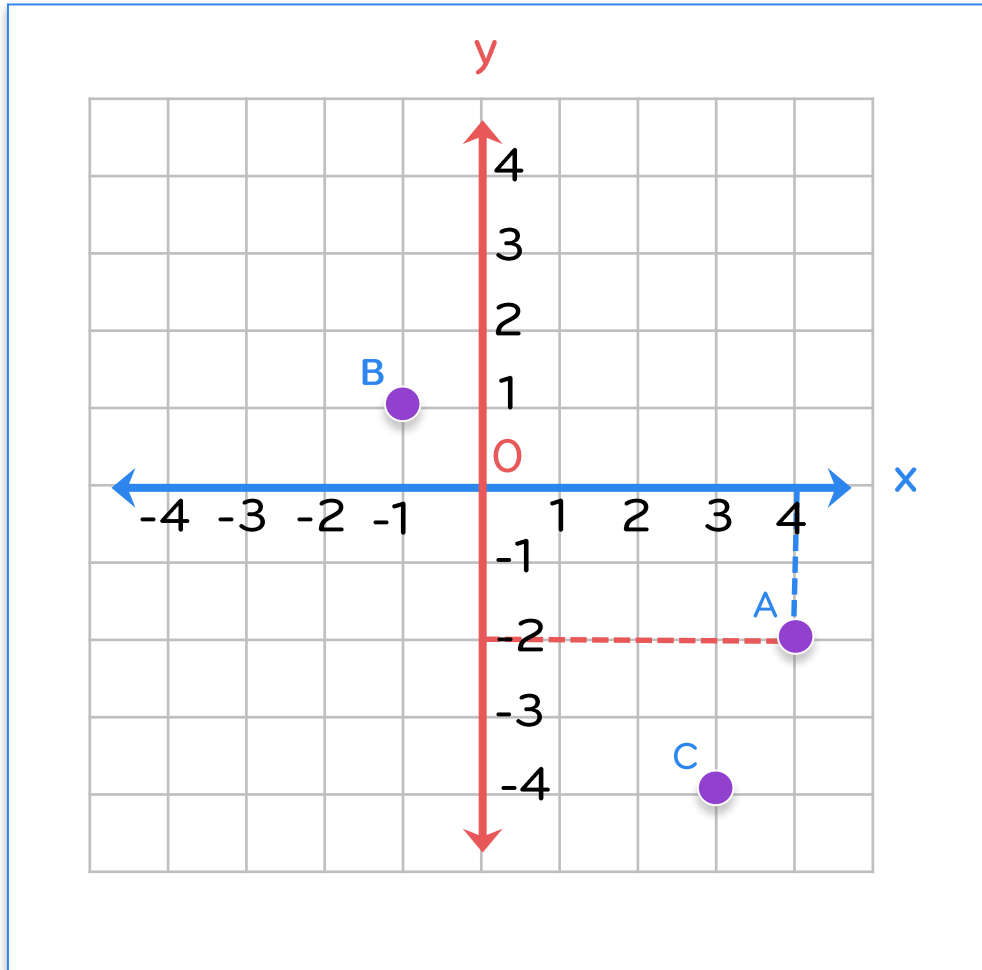


coordinates in all four quadrants



transformations (translation, reflection, rotation)

# Revision: Coordinates



- 1) What are the coordinates of B and C (x-value , y-value)

A (4, -2)

B (  ,  )

C (  ,  )

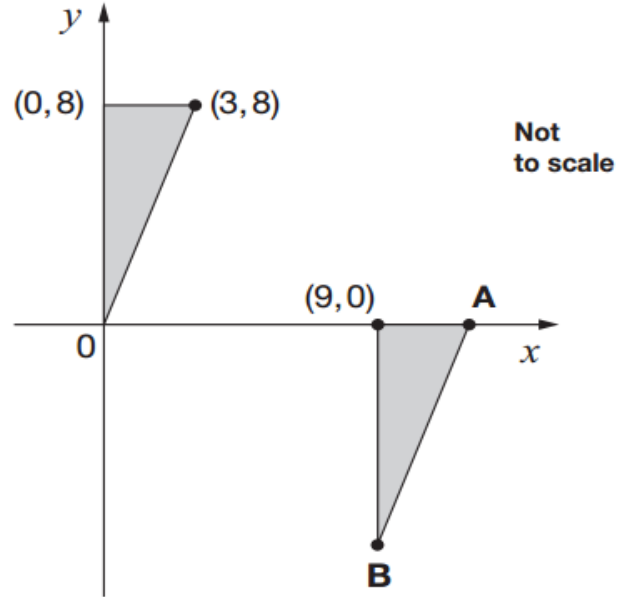
- 3) Draw a cross in position (-4, -2)



Complete

What do you notice?

Here are two **identical** shaded triangles on coordinate axes.



What do you know?

Can you show your working out?

Write the coordinates of points A and B.

A = (     ,     )

B = (     ,     )

How could you extend the question?

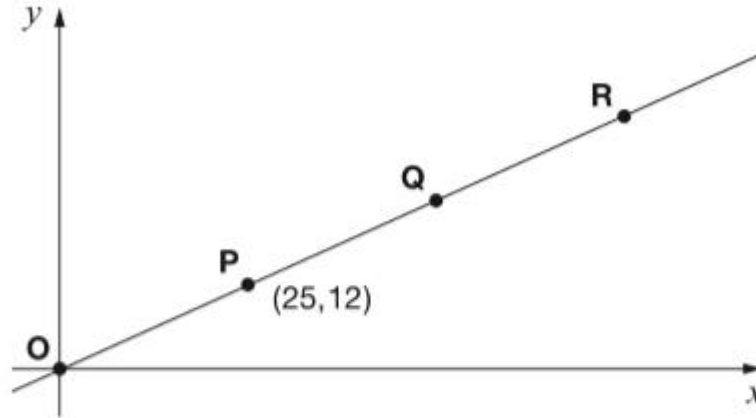


# Complete

## Question 2

What do you notice?

Here is a line on coordinate axes.



Points **O**, **P**, **Q** and **R** are equally spaced.

The coordinates of **P** are (25, 12).

What are the coordinates of **R**?

R =

What do you know?

How could you extend the question?



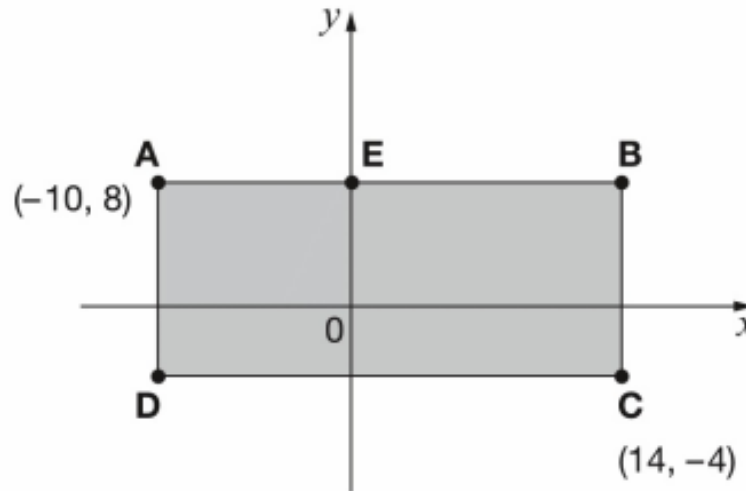
# Question 3

Complete

What do you notice?

**ABCD** is a rectangle drawn on coordinate axes.

The sides of the rectangle are parallel to the axes.



Can you show your working out?

What are the coordinates of **D** and **E**?

**D** is

**E** is

What do you know?

How could you extend the question?

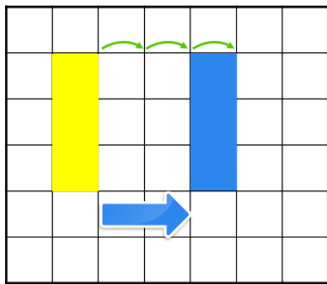
Transformations are ways of changing or moving shapes.

We are revising three forms of transformations

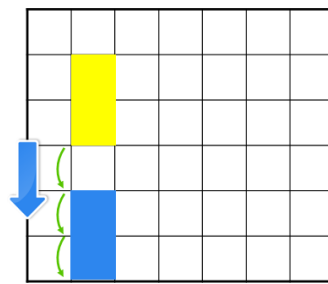
1. Translation
2. Reflection
3. Rotation

## 1. Translation

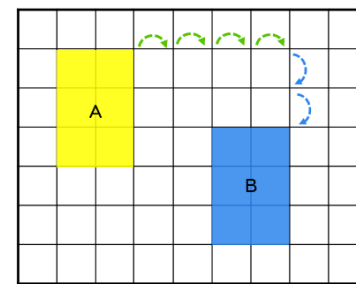
Change position by moving or sliding but not changing size or turning it



Horizontal translation



Vertical translation

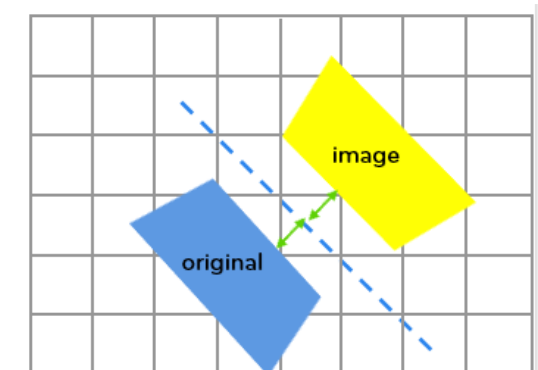
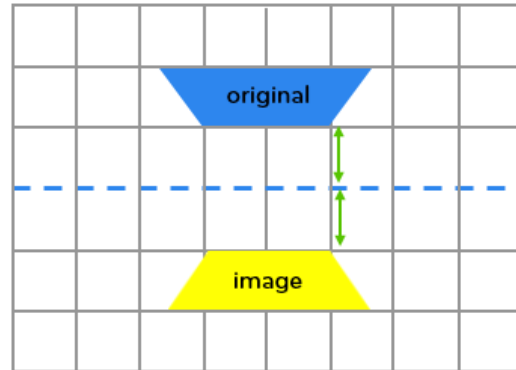
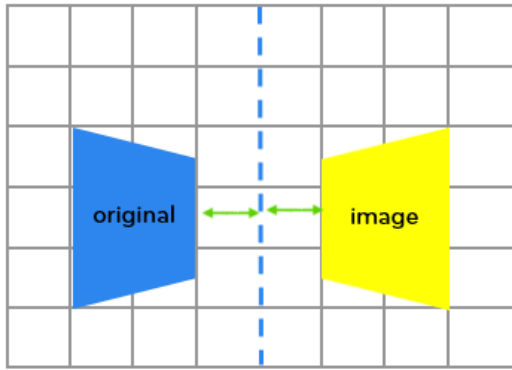


Diagonal translation

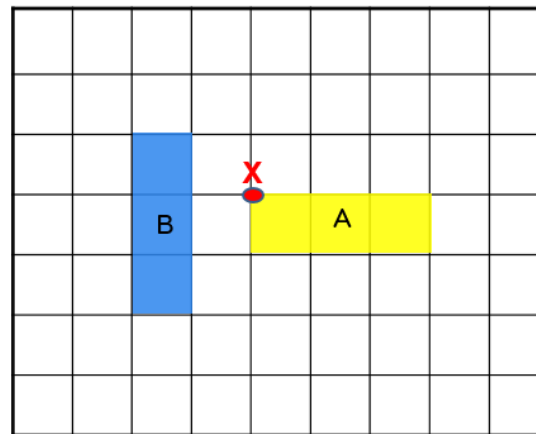


# Revision: Transformations

## 2. Reflection – change position by flipping (mirror line) but not turning



## 3. Rotation – change position by turning a figure around a point by a certain amount of degrees but not changing the size

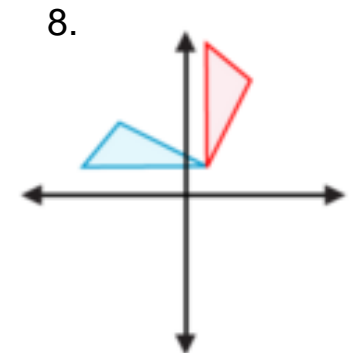
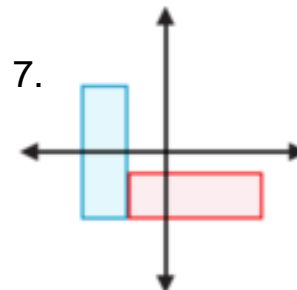
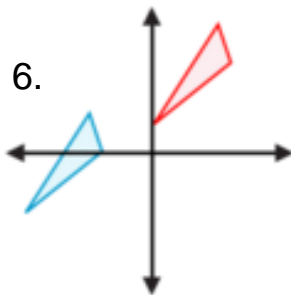
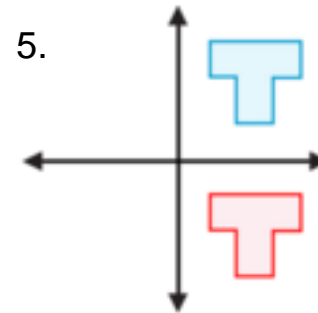
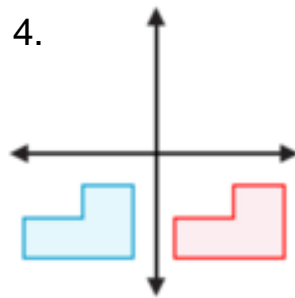
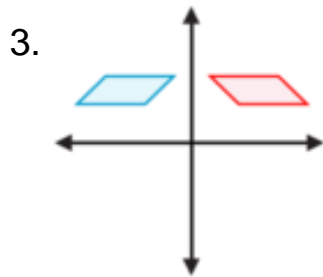
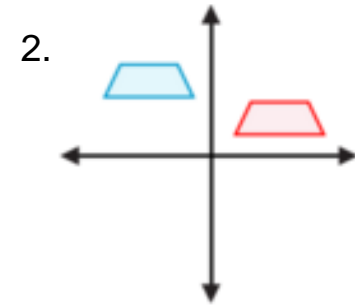
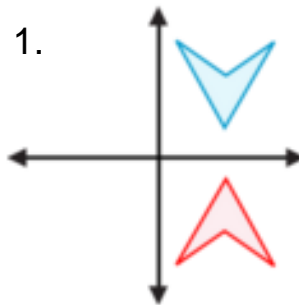


90° turn around point X

# Revision: Transformations

Say if the following is a:

- 1) Translation
- 2) Reflection
- 3) Rotation

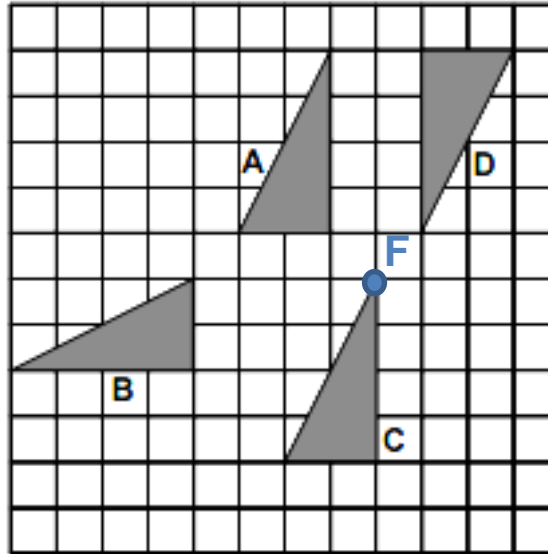


# Question 4



Complete

What do you notice?



What do you know?

Can you show your working out?

Write the correct letter in these sentences:

- Shape \_\_\_\_\_ is a reflection of shape A
- Shape C is a \_\_\_\_\_ of shape A
- If you rotate Shape C \_\_\_\_\_° it will have the same orientation as Shape D

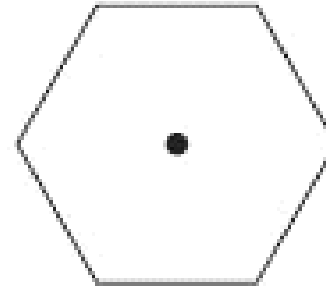
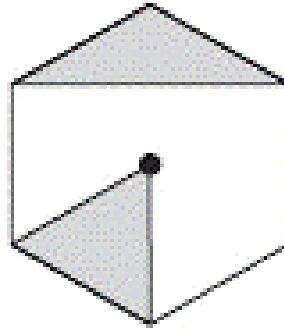
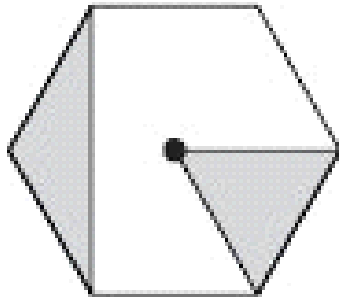
How could you extend the question?

## Question 5



Complete

What do you notice?



What do you know?

Can you show your working out?

This pattern is made by turning a shape clockwise through  $90^\circ$  each time.

Draw the two missing triangles on the last shape.

How could you extend the question?

# Question 6

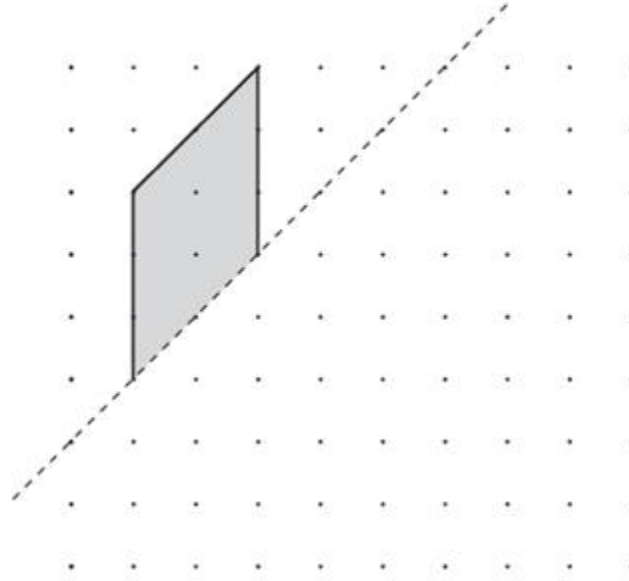


Complete

What do you notice?

Draw the **reflection** of the shape in the **mirror line**.  
Use a ruler.

mirror line





What do you know?

Can you show your working out?

How could you extend the question?

## Let's review:



-  Can describe 2D coordinates in all four quadrants
-  Can identify, describe and represent the position of a shape following translation, reflection and rotation

Draw a circle around the smiley face to show how you feel about what we've just been doing.



Is there something you would like to go over?