Hello to you all.

Welcome to week ten of the Summer break.

As before, if your child would like to practise more during this half term they can find additional resources from:

Oak National Academy [https://www.thenational.academy/]

BBC bitesite [https://www.bbc.co.uk/bitesize].

https://whiterosemaths.com/homelearning/year-4/ - these units are stand alone and are intended as revision of learning we have already completed this year.

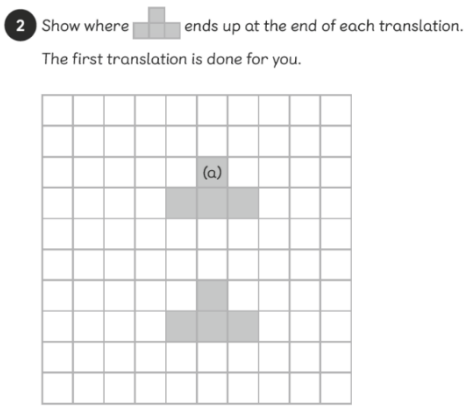
As always, if you have any questions relating to the work we have set please contact us via email. If you wish to talk to us, please specify this and we can ring you back.

Warm wishes

G Casson

Hi All – welcome to week ten of your home learning.

We are now moving on to our unit on Position and Movement. This week's lessons are a mixture of work set on My Maths and the lessons below. The lessons below are as before; work through each lesson carefully, completing the guided practice as you go. Then work on the blue questions. There are yellow questions available at the end of each lesson. Where you have questions like the ones on the left, please draw the grids in your books or on a piece of paper. If you have grid paper at home, you could use that. There is no quiz this week because I have set work on My Maths. Have fun!



Lesson 1 – Monday 15th June 2020

Please complete the homework sessions for the My Maths set below. Complete the work in the order set to help with our maths learning journey. I advise that you work through each lesson before completing the homework part. You are aiming to get 100% correct in the homework sessions.

1. Position and turning.

2. Translating

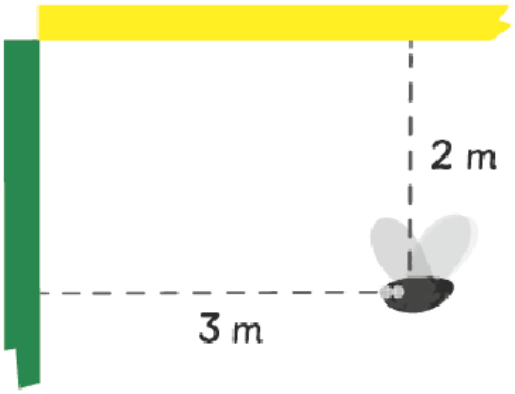
3. Coordinates.

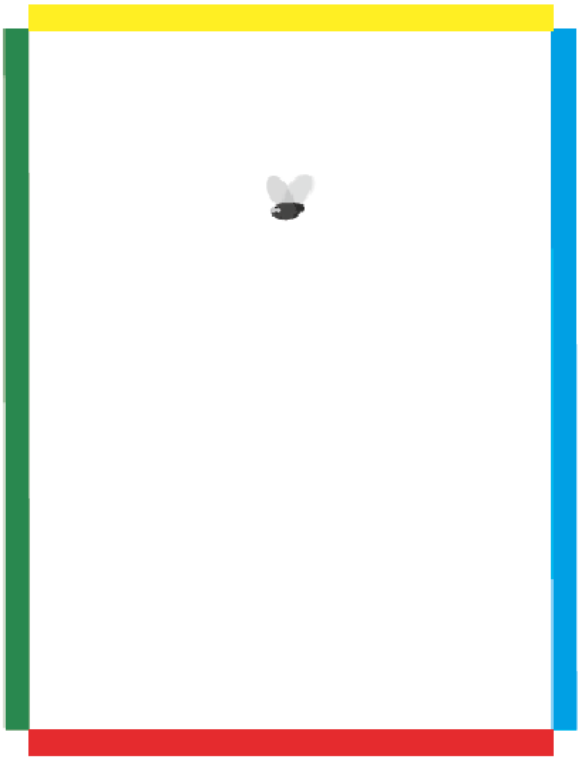
Lesson 2- Tuesday 16th June 2020

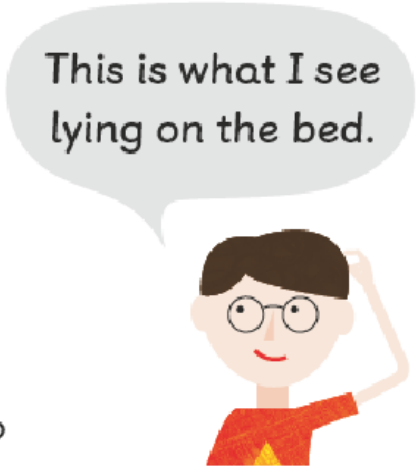
Describing Position

In Focus

 lies on his bed and looks up the ceiling.

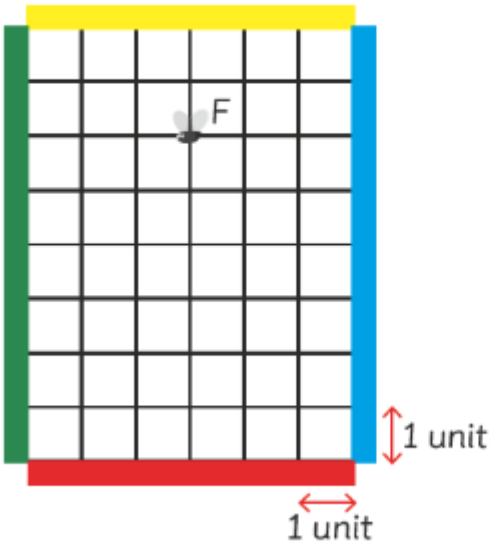


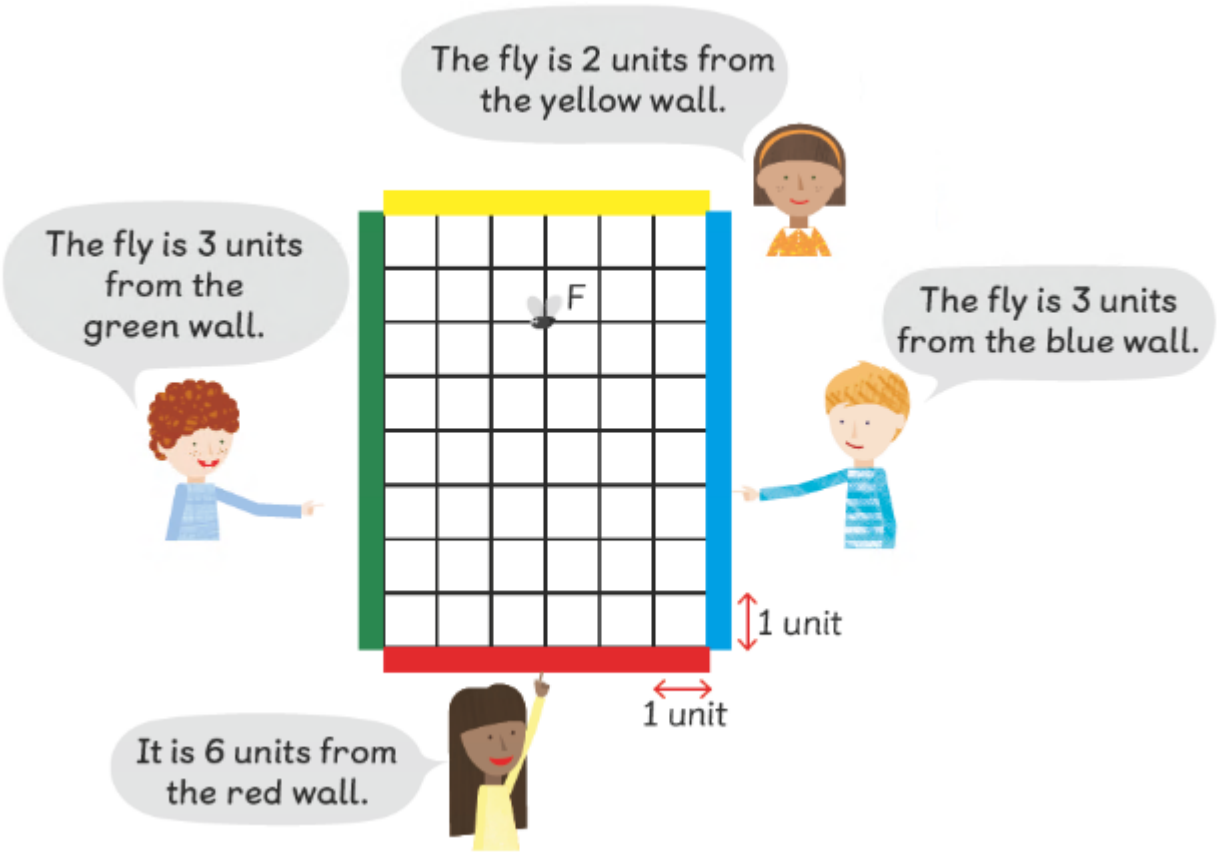




How can Charles tell the exact position of the fly?

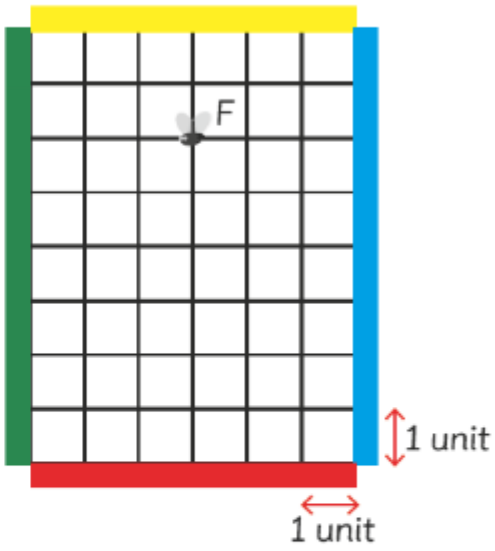
1 How far is the fly from the walls?





2 What do you think of their suggestions?

How far is the fly from the red wall?



The fly is 6 units from the red wall and 2 units from the yellow wall.

The fly is 3 units from the green wall and 3 units from the blue wall.

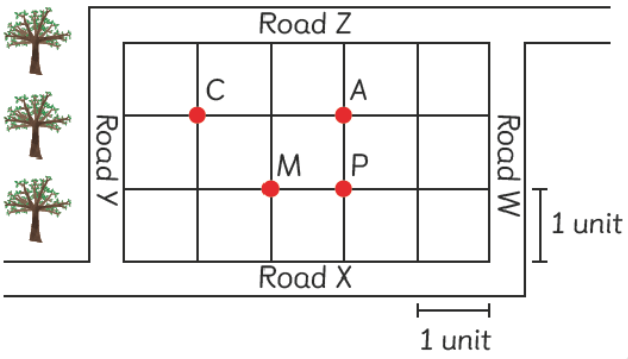
I think Charles must say how far the fly is from all four walls.

I don't think it is necessary to say how far the fly is from all four walls.

Think now about our work on graphs.

Guided Practice

1 Several tourist attractions are surrounded by four major roads.



C  Cathedral

A  Ancient Ruins

P  Palace

M  Museum

In this case, 1 unit could be 1 km.

Describe the location of each tourist attraction by describing its distance from the roads.

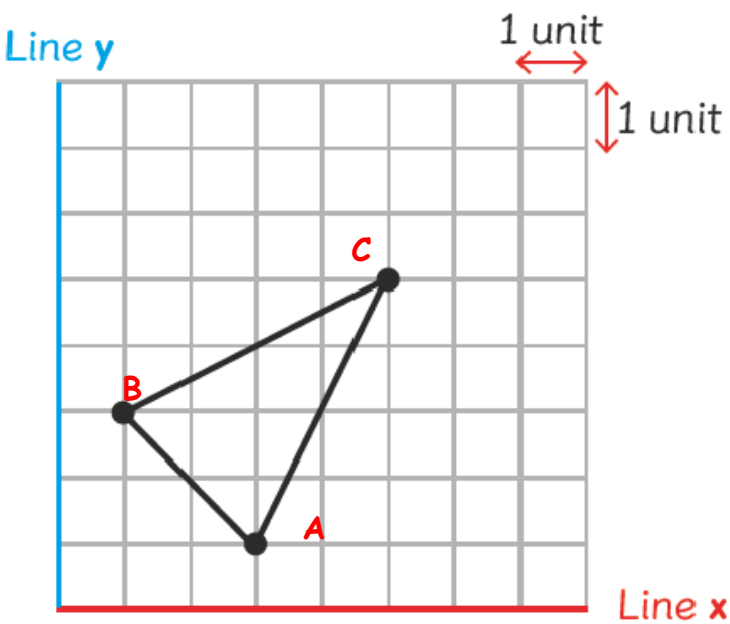
Cathedral:
2 km from road X
1 km from road Y
1 km from road Z
4 km from road W

Ancient Ruins:
2 km from road X
3 km from road Y
1 km from road Z
2 km from road W

Palace:
1 km from road X
2 km from road Z
3 km from road Y
2 km from road W

Museum:
1 km from road X
3 km from road Z
2 km from road Y
3 km from road W

2 Describe the position of the vertices of the triangle.



How far are they from the two lines?

1 unit = 1 cm

A is 1 cm from X and 3 cm from Y

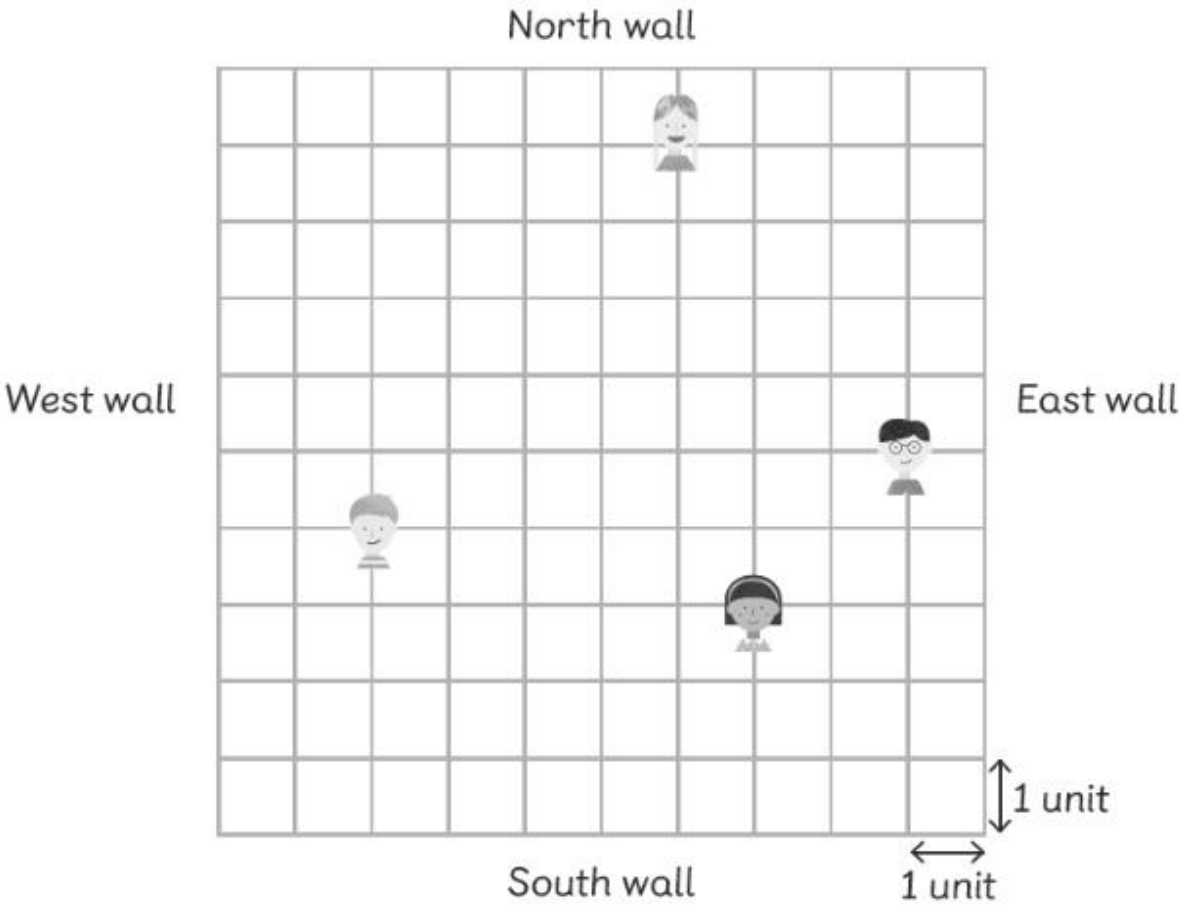
B is 3cm from X and 1 cm from Y

C is 5 cm from X and 5 cm from Y

Blue Questions

1  ,  ,  and  are standing at different locations in the hall.

Describe their positions.



(a)  is

5 units from the North wall.

1 units from the East wall.

5 units from the South wall.

9 units from the West wall.

(b)  is

1 units from the North wall.

4 units from the East wall.

9 units from the South wall.

6 units from the West wall.

(c)  is

7 units from the North wall.

3 units from the East wall.

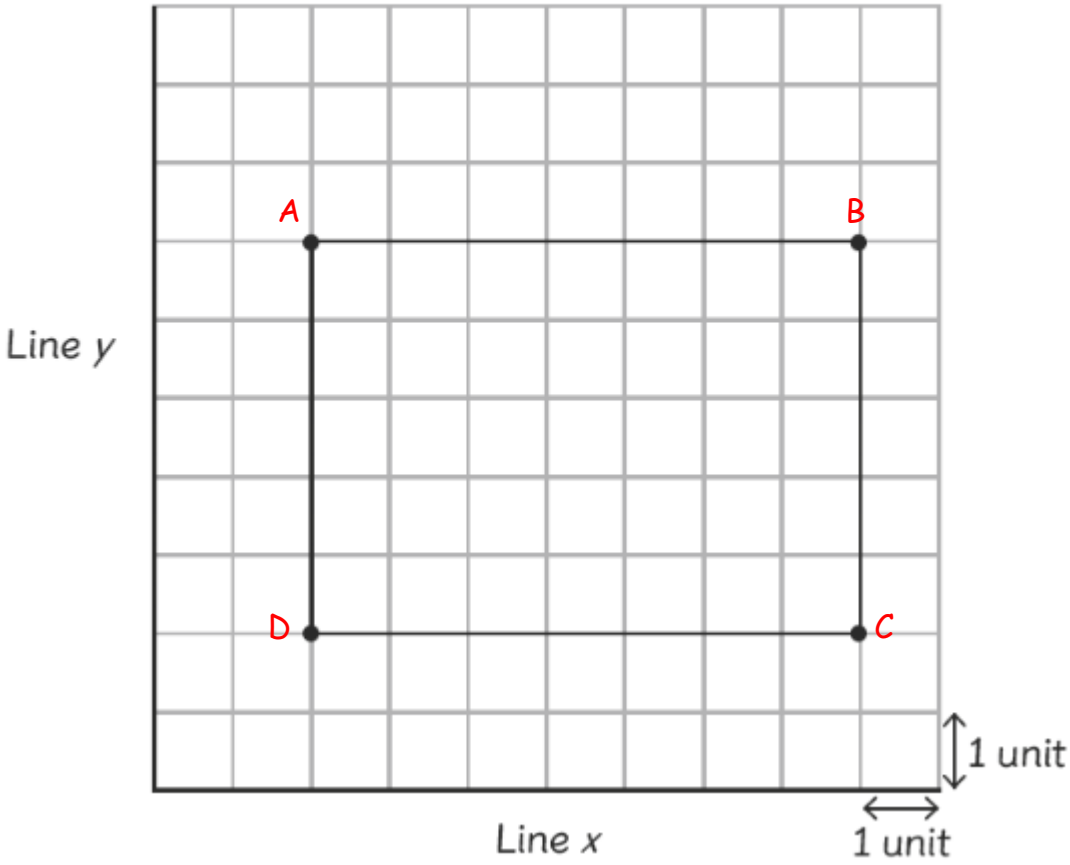
3 units from the South wall.

7 units from the West wall.

(d)  is

6	units from the North wall.
8	units from the East wall.
4	units from the South wall.
2	units from the West wall.

2 Describe the positions of the vertices of Rectangle ABCD.



(a) Point A:

2 units from Line y

7 units from Line x

(b) Point B:

9 units from Line y

7 units from Line x

(c) Point C:

9 units from Line y

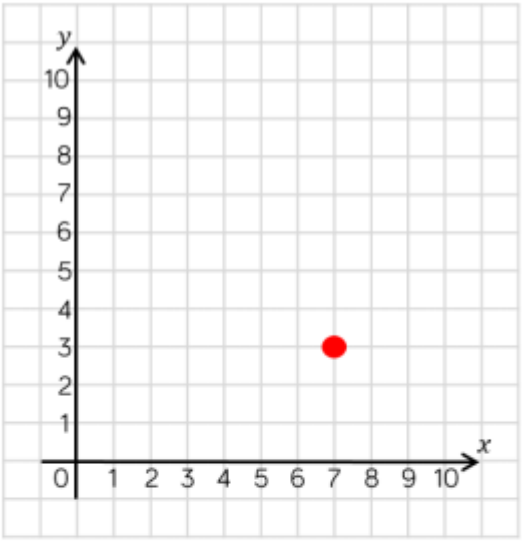
2 units from Line x

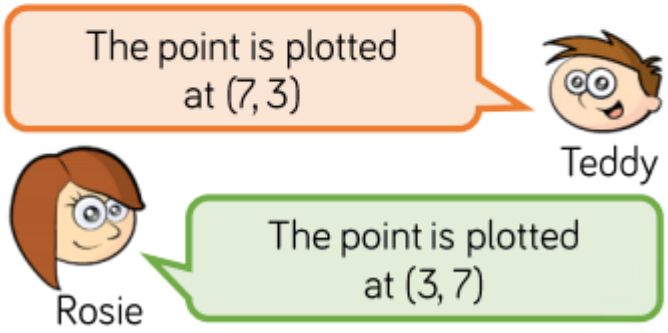
(d) Point D:

2 units from Line y

2 units from Line x

Yellow question





Who is correct?
What mistake has one of the children made?

Teddy is correct. Rosie has read the y-axis before the x-axis.

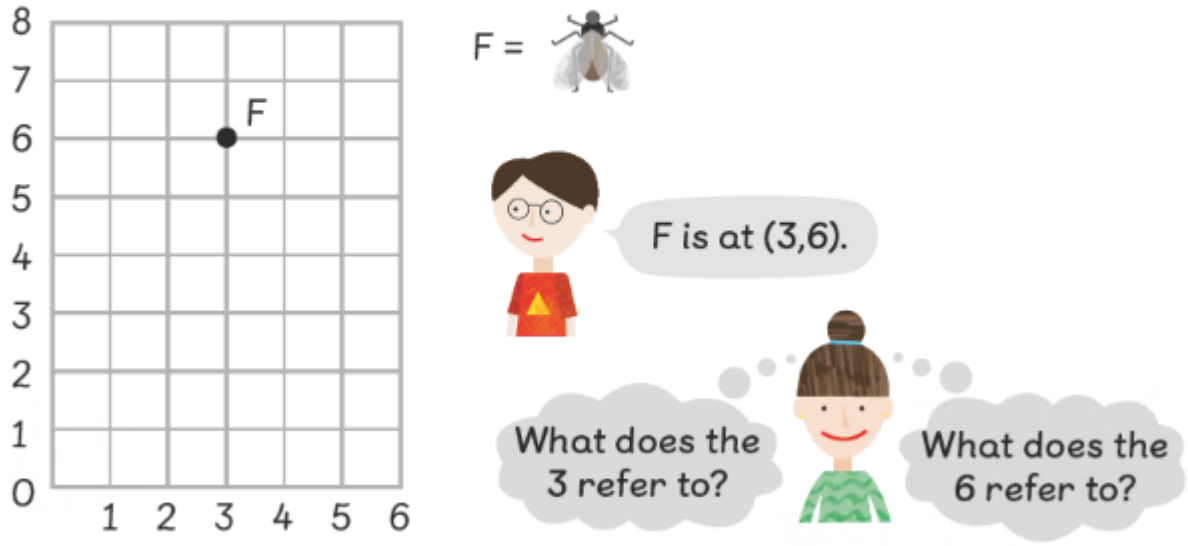
Lesson 3 – Wednesday 17th June 2020

Describing position.

Read through the lesson and then complete the guided practice. Work through the questions.

In Focus

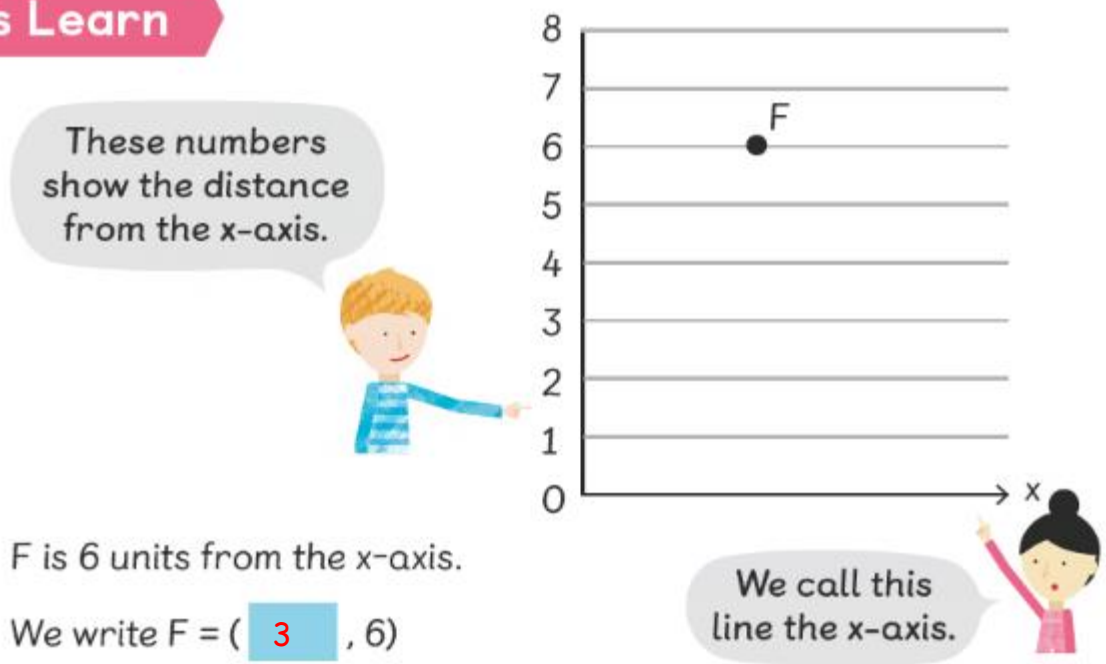
Charles invents a way to describe the position of the fly.



Explain Charles' method. What does (3,6) mean?

Let's Learn

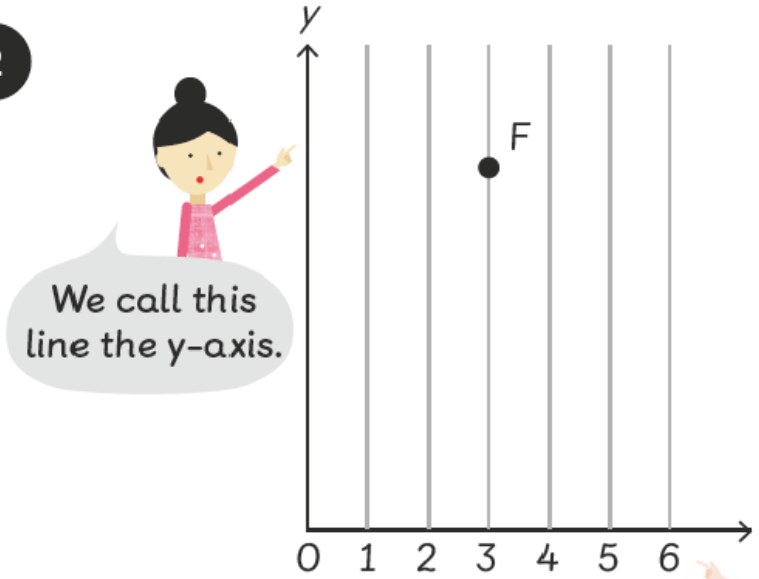
1



F is 6 units from the x-axis.

We write F = (3 , 6)

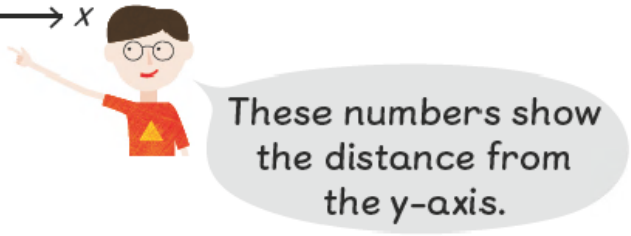
2



F is 3 units from the y-axis.

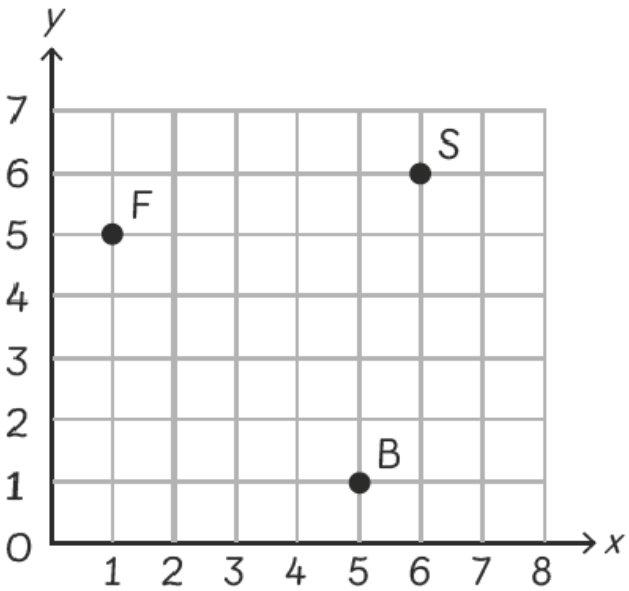
We write F = (3, 6)

We call (3,6) the **coordinates** of the point F.



Guided Practice

1 Using coordinates, describe the positions of a bee, B; a spider, S; and a fly; F.



B is at (5 , 1).

B is 5 unit from the x-axis.

B is 1 units from the y-axis.

S is at (6 , 6).

S is 6 units from the x-axis.

S is 6 units from the y-axis.

F is at (1 , 5).

F is 1 units from the x-axis.

F is 5 unit from the y-axis.

2 A quadrilateral has vertices P, Q, R and S.

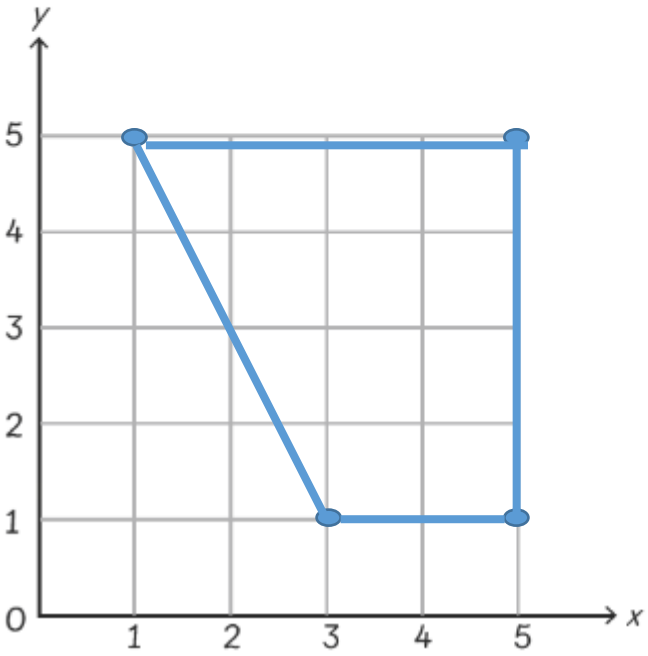
P is at (1,5)

Q is at (5,5)

R is at (5,1)

S is at (3,1)

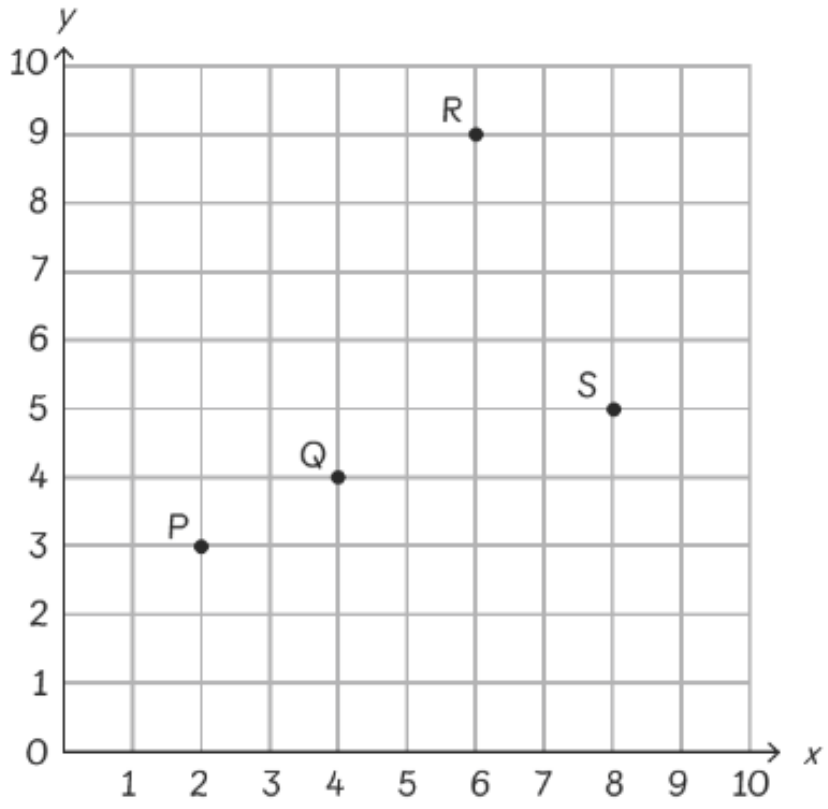
What type of quadrilateral is PQRS?



We call this shape a trapezium

Blue questions.

1 Describe the positions of the points using coordinates.



(a) Point P is [3] units from the *y*-axis.

Point P is [2] units from the *x*-axis.

Point P is at ([2] , [3]).

(b) Point Q is [4] units from the y-axis.

Point Q is [4] units from the x-axis.

Point Q is at ([4] , [4]).

(c) Point R is [9] units from the y-axis.

Point R is [6] units from the x-axis.

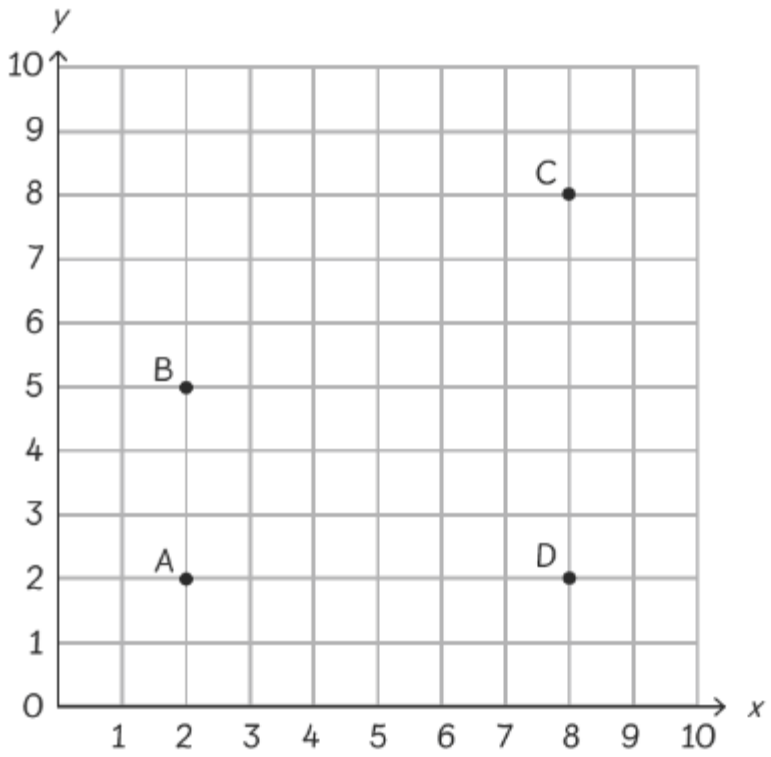
Point R is at ([6] , [9]).

(d) Point S is [5] units from the y-axis.

Point S is [8] units from the x-axis.

Point S is at ([8] , [5]).

2 A, B, C and D are the vertices of a quadrilateral. Describe the positions of the vertices using coordinates.



(a) Point A is [2] units from the *y*-axis.

Point A is [2] units from the *x*-axis.

Point A is at ([2] , [2]).

(b) Point B is [5] units from the *y*-axis.

Point B is [2] units from the *x*-axis.

Point B is at ([2] , [5]).

(c) Point C is [8] units from the *y*-axis.

Point C is [8] units from the *x*-axis.

Point C is at ([8] , [8]).

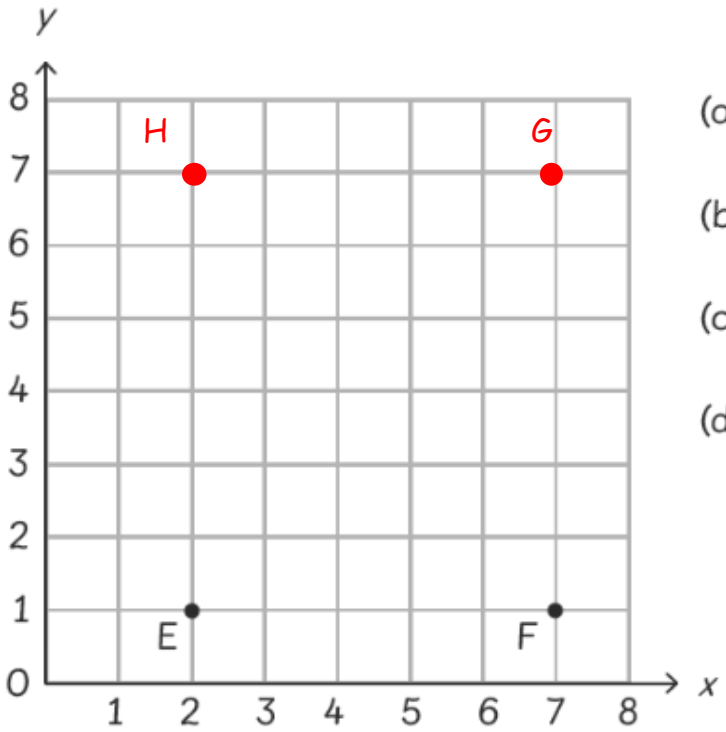
(d) Point D is [2] units from the *y*-axis.

Point D is [8] units from the *x*-axis.

Point D is at ([8] , [2]).

(e) What kind of quadrilateral is ABCD? [Trapezium]

3 Plot the other two vertices of square EFGH and name all the vertices using coordinates.



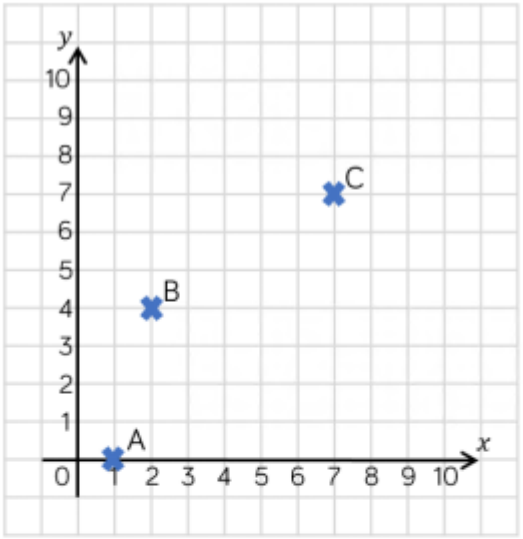
(a) Point E is at ([2] , [1])

(b) Point F is at ([7] , [1])

(c) Point G is at ([7] , [7])

(d) Point H is at ([2] , [7])

Yellow question



Which clue matches which coordinate?

Clue 1	My x coordinate is half of my y coordinate.
Clue 2	My y coordinate is less than my x coordinate.
Clue 3	Both my coordinates are prime numbers.

Clue 1 - B
Clue 2 - A
Clue 3 - C

Prove your answers by saying why.

Lesson 4 – Thursday 18th June 2020

Plotting Points.

Read through the lesson and then complete the guided practice. Work through the questions.

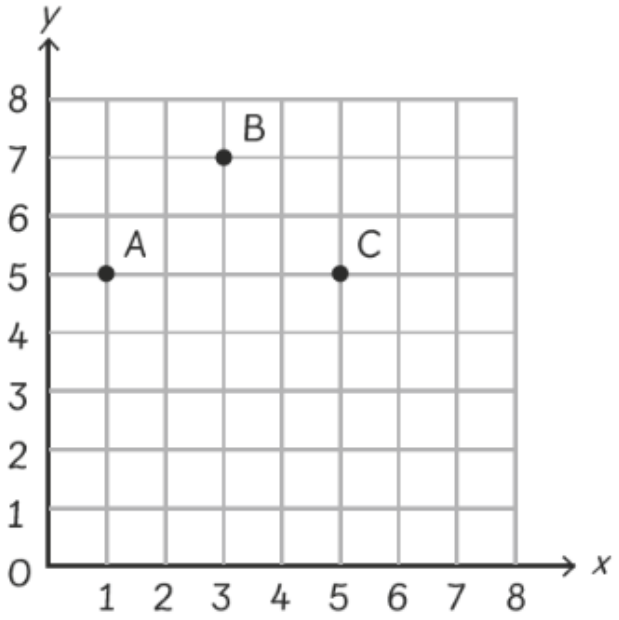
In Focus

Elliott has plotted three points.

Where should D be in order for ABCD to be a square?

Could ABCD be a quadrilateral with one line of symmetry?

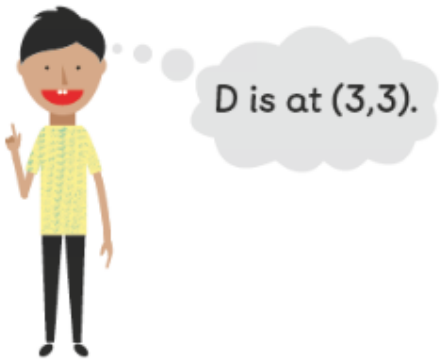
Could ABCD be a rectangle?



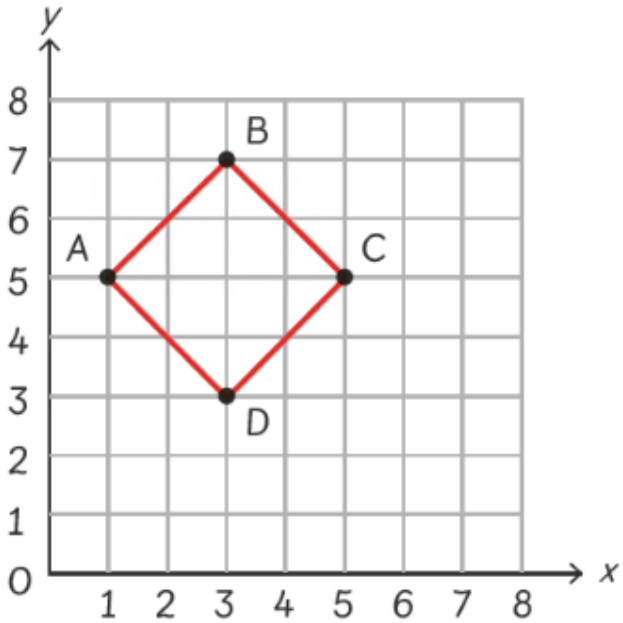
What if ABCD is a trapezium?

Let's Learn

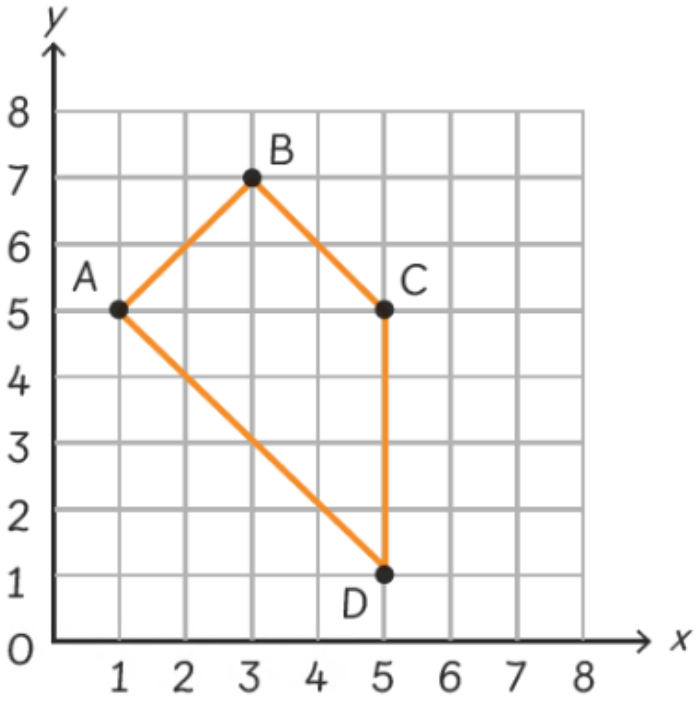
1 ABCD is a square.



D is at (3,3).

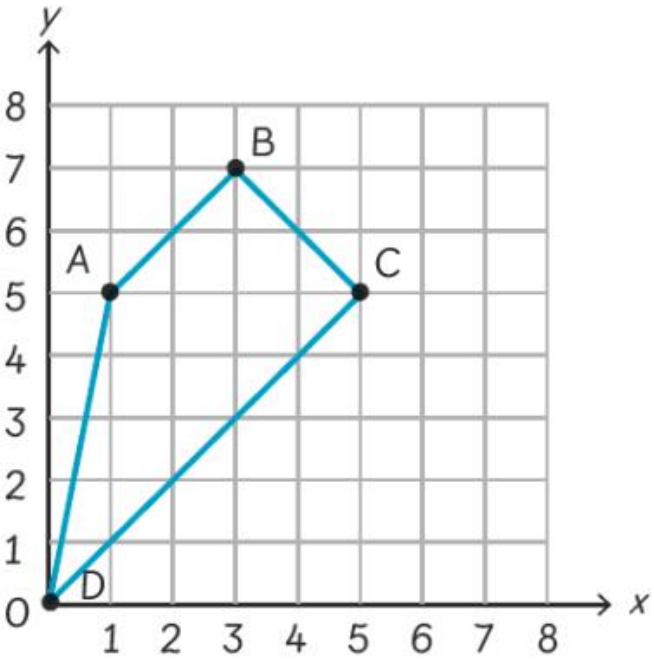


2 ABCD is a trapezium.



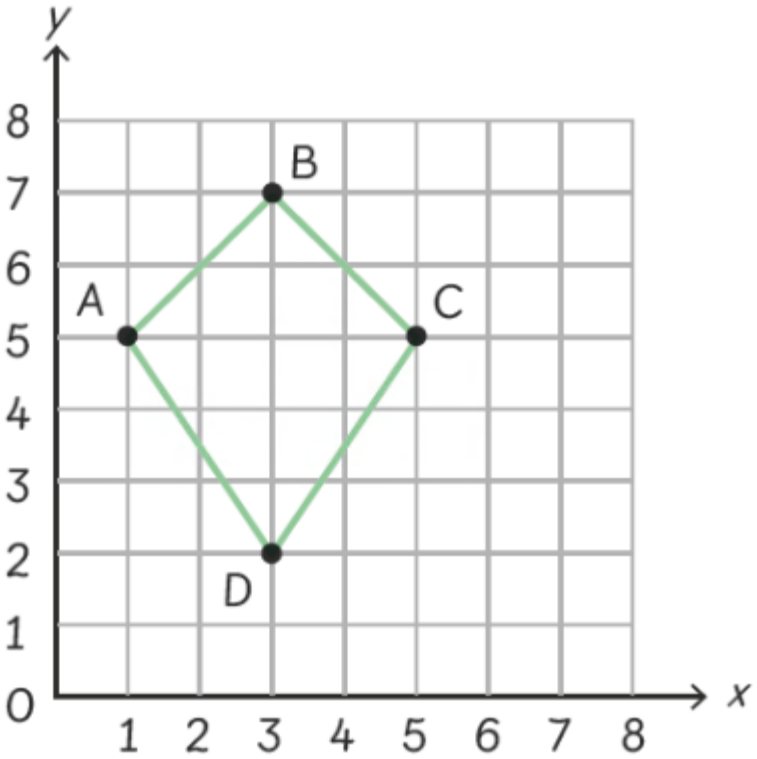
D is at (5 , 1).

D is at (0,0).



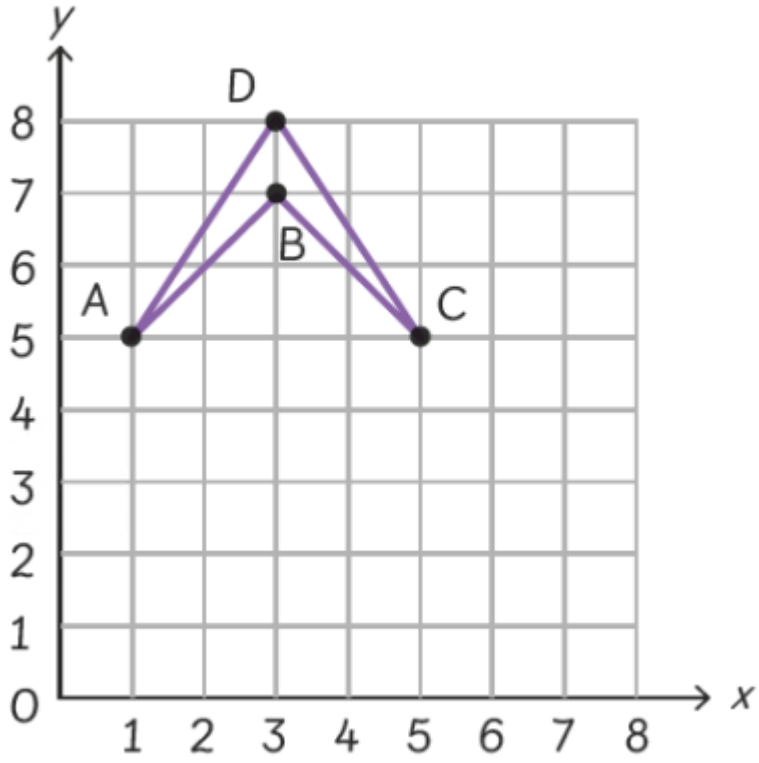
Are there other ways to make ABCD a trapezium?

3 ABCD has one line of symmetry.



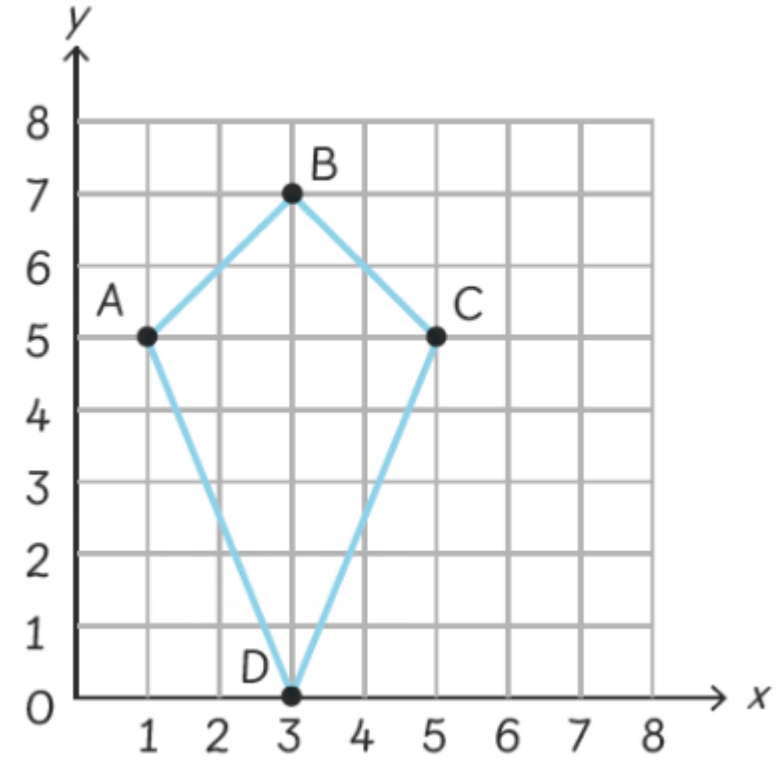
What would C be?

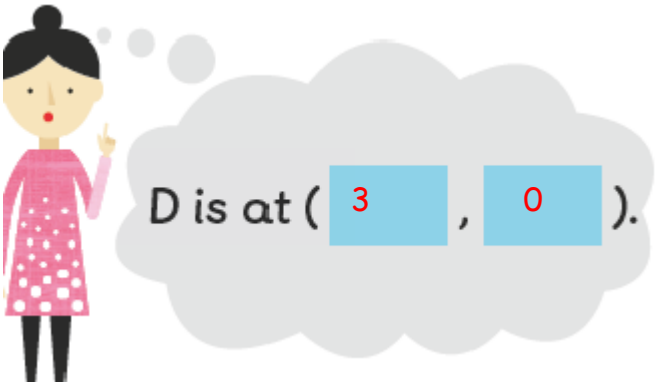
5 , 5



What would B be?

3 , 7

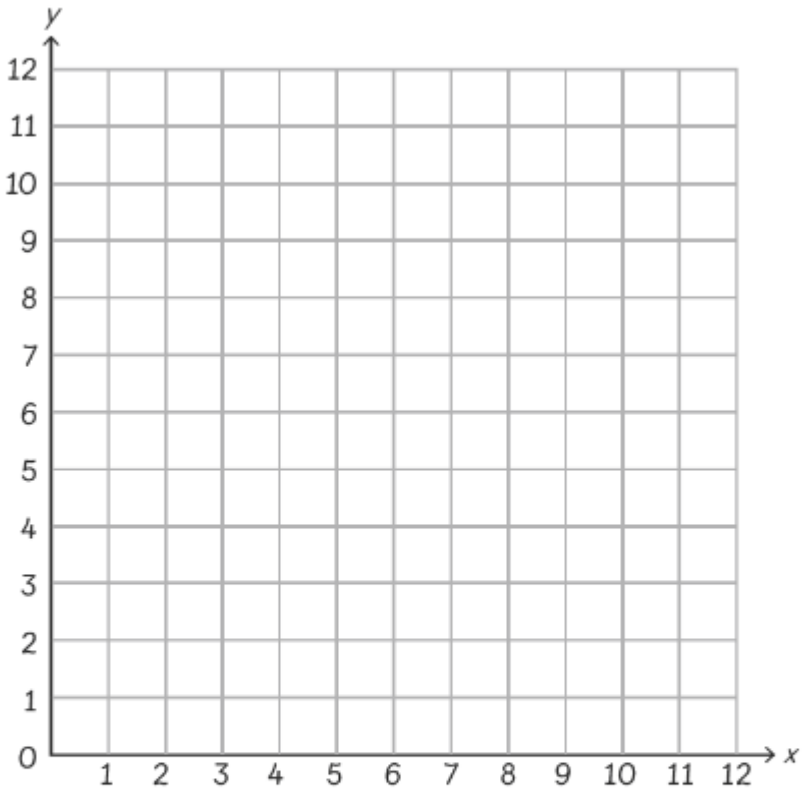




What would A be?

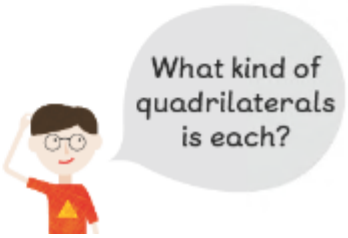
1 , 5

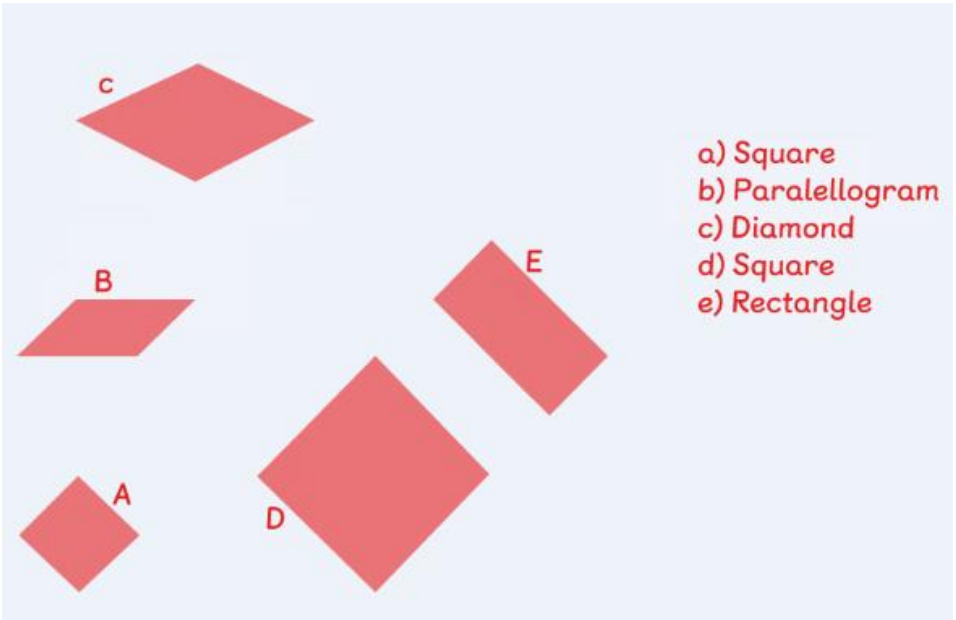
Guided Practice



Draw each quadrilateral.

(a)	ABCD	A (1,2), B (2,3), C (3,2), D (2,1)
(b)	EFGH	E (1,5), F (3,5), G (4,6), H (2,6)
(c)	JKLM	J (4,10), K (6,9), L (4,8), M (2,9)
(d)	PQRS	P (5,3), Q (9,3), R (7,5), S (7,1)
(e)	TUVW	T (8,6), U (9,7), V (11,5), W (10,4)



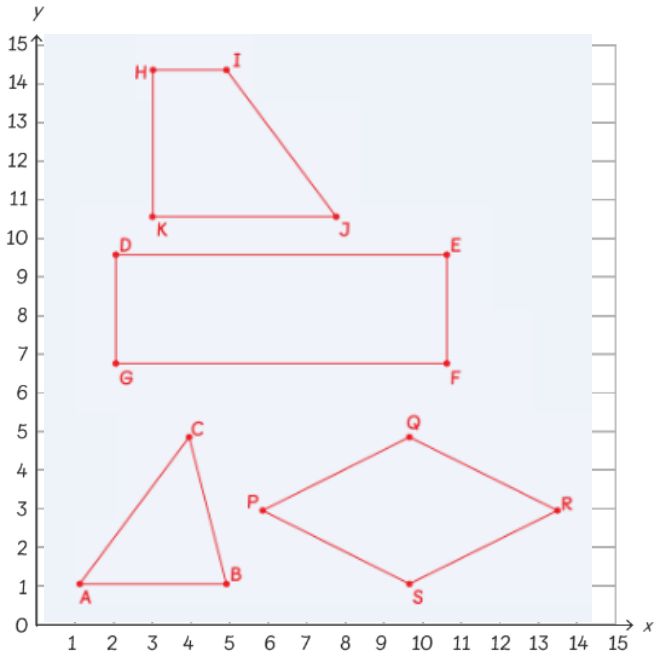


a) Square
b) Paralellogram
c) Diamond
d) Square
e) Rectangle

Blue questions.

1 Plot the vertices of each figure given on the next page, and name the shape.

In your books or on a piece of paper draw a grid that looks like the one below.



(a) Figure ABC

A (1,1), B (5,1), C (4,5)

Figure ABC is a Triangle .

(b) Figure DEFG

D (2,10), E (11,10), F (11,7), G (2,7)

Figure DEFG is a Rectangle .

(c) Figure HIJK

H (3,15), I (5,15), J (8,11), K(3,11)

Figure HIJK is a Trapezium .

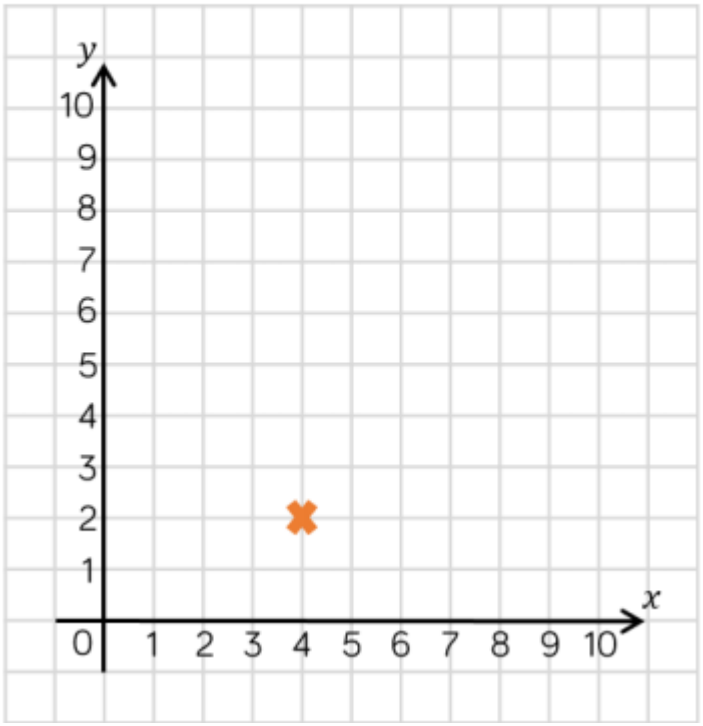
(d) Figure PQRS

P (6,3), Q (10,5), R (14,3), S (10,1)

Figure PQRS is a [Rhombus] .

Yellow Question.

What shapes could be made by plotting three more points?



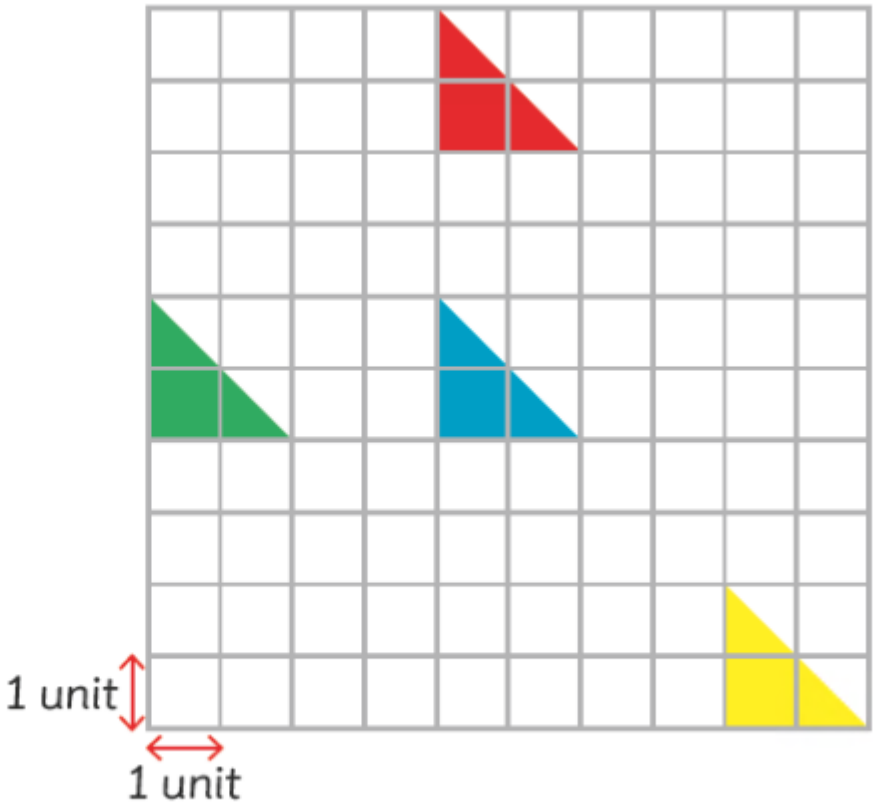
The children could make a range of quadrilaterals dependent on where they plot the points.
If children plot some of the points in a line they could make a triangle.

Lesson 5 – Friday 19th June 2020

Describing Movements.

Read through the lesson and then complete the guided practice. Work through the questions.

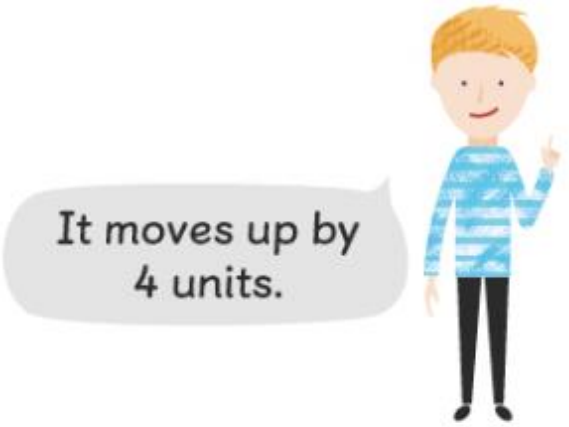
In Focus

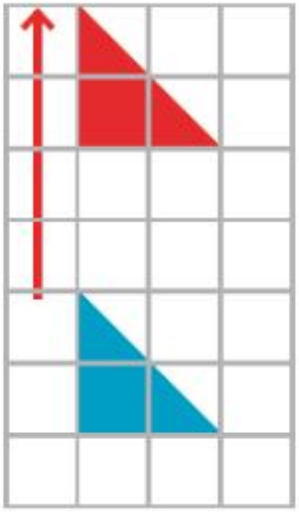


Describe how  can move into each of the three positions.

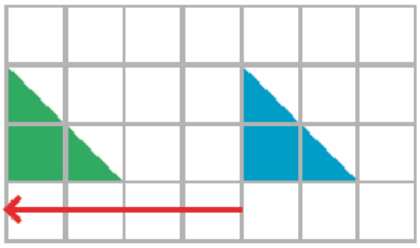
Let's Learn

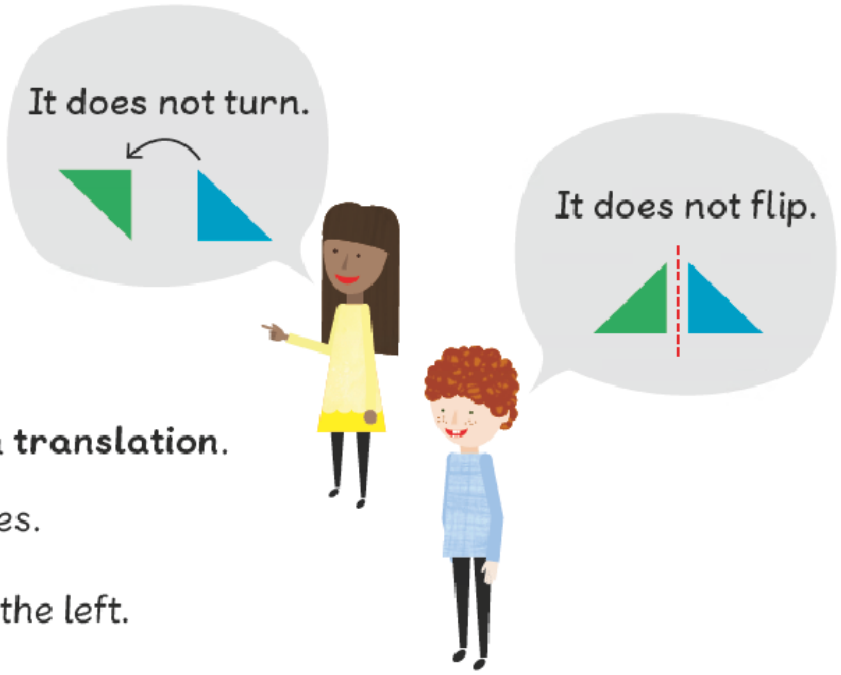
1 Describe  's movement into the position shown by  .





2 Describe this movement.



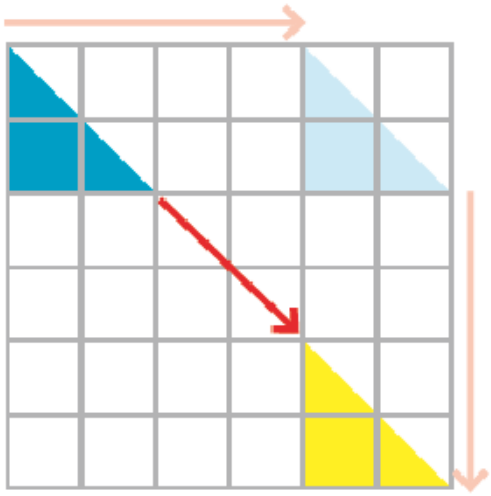


This movement is called a **translation**.

We say that  translates.

 translates 4 units to the left.

3 Describe this movement.

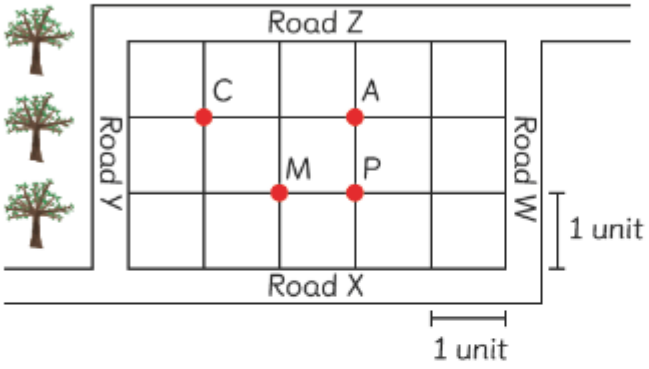


First  translates 4 units to the right.

Then it translates 4 units downwards.

Guided Practice

1



C  Cathedral

A  Ancient Ruins

P  Palace

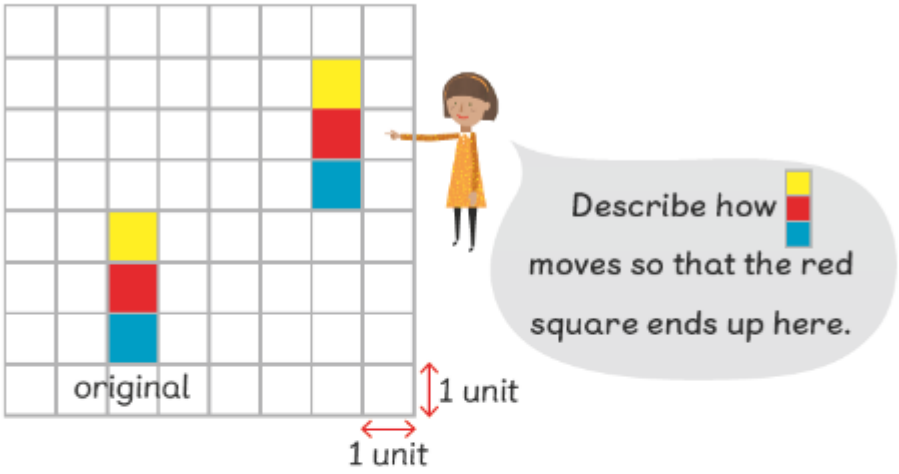
M  Museum

Describe the translation that can get a person from one place to another.

From	To
Cathedral	Ancient Ruins
Palace	Ancient Ruins
Palace	Museum
Cathedral	Palace
Museum	Ancient Ruins

Translation
2 units to the right
1 unit up
1 unit to the left
1 unit down, 2 units right
1 unit right, 1 unit up

2 The diagram shows the original position of  .



Show where  ends up after each translation is finished.

(a)  moves up by 3 units.

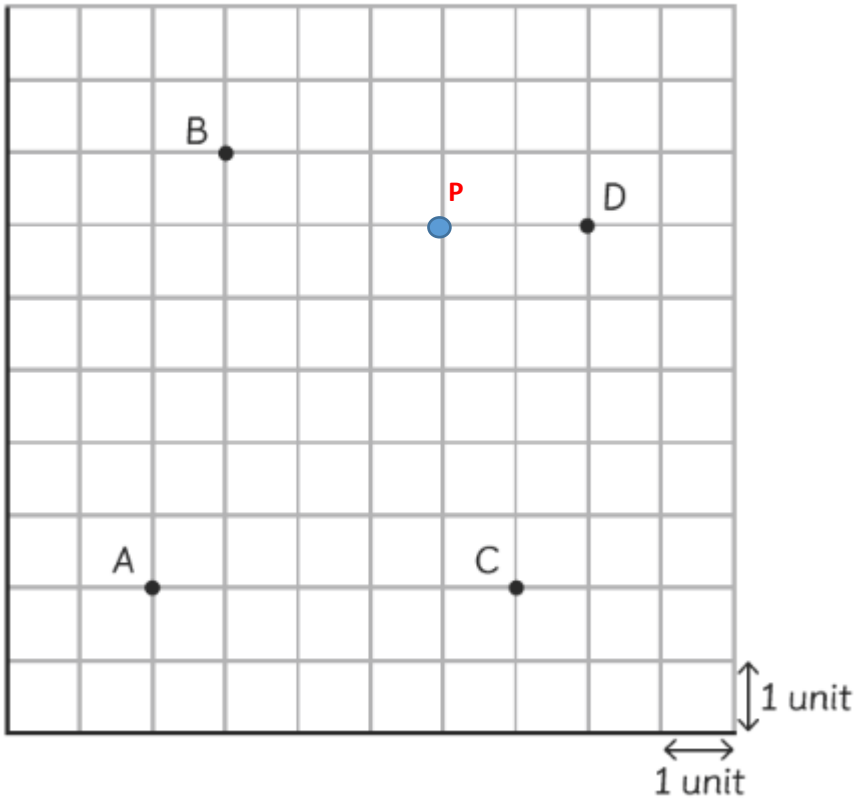
(b)  moves to the right by 4 units.

(c)  moves to the left by 2 units.

End of translation it is 4 units right and 3 units up.

Blue Questions.

1 Some points are drawn on a square grid.



Describe these movements

(a) From Point A to Point B:

A translates [1] unit to the right then [6] units upwards.

(b) From Point B to Point C:

[4 units to the right then 6 units downwards]

(c) From Point D to Point A:

5 units downwards and 6 units left

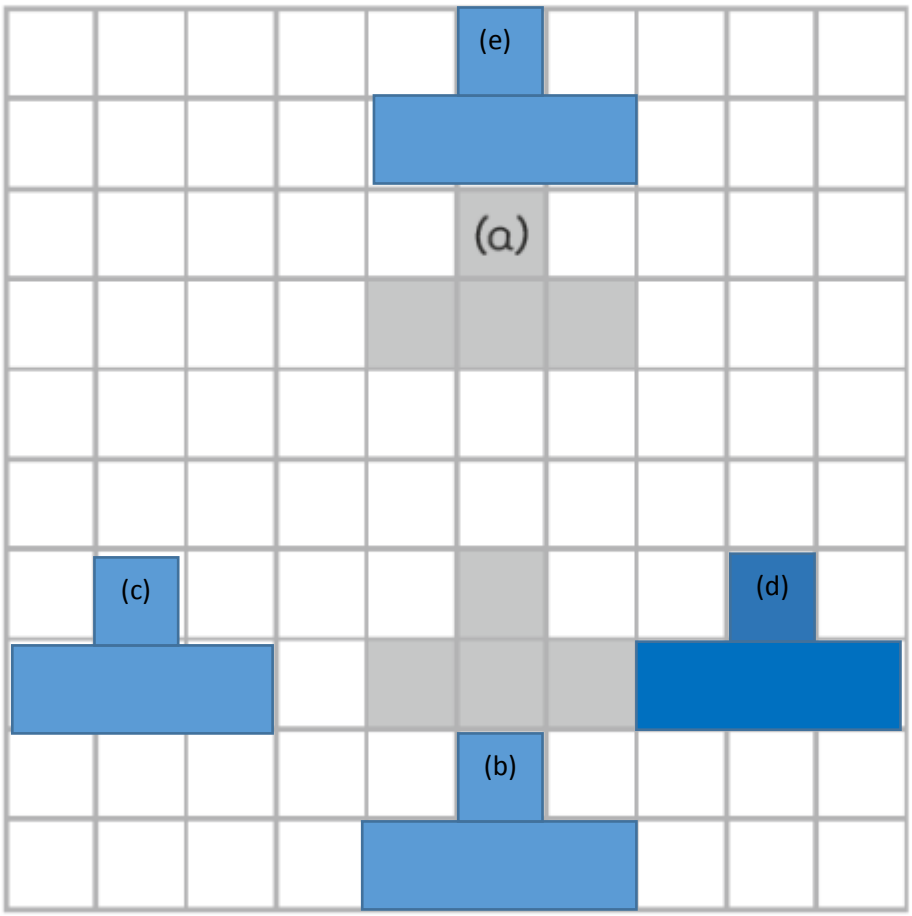
(d) From Point D to Point B:

5 units left then 1 unit upwards

(e) Point A translates 4 units to the right and 5 units upwards to Point P. Plot Point P on the grid.

2 Show where  ends up at the end of each translation.

The first translation is done for you.



(a)  moves up by 4 units.

(b)  moves down by 2 units.

(c)  moves to the left by 4 units.

(d)  moves to the right by 3 units.

(e)  moves to the right by 2 units and then moves up by 6 units.

Children will need to start at the same point each time before they plot their shape.

Yellow question

Remember, use statements and known facts to help support your answers. Proving your ideas from models is a really good way at convincing me.

When you are plotting a point on a grid it does not matter whether you go up or across first as long as you do one number on each axis.

Amir

Do you agree with Amir?
Convince me.

Amir is incorrect. The x-axis must be plotted before the y-axis. Children prove this by plotting a pair of coordinates both ways and showing the difference.