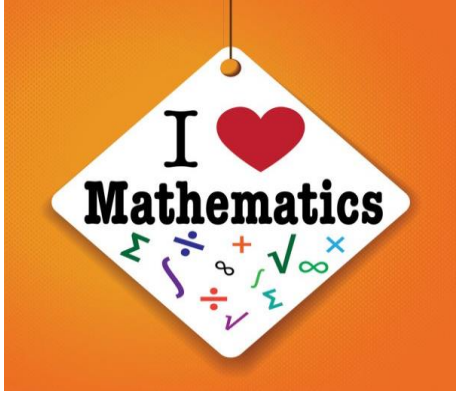


Monday 1st February

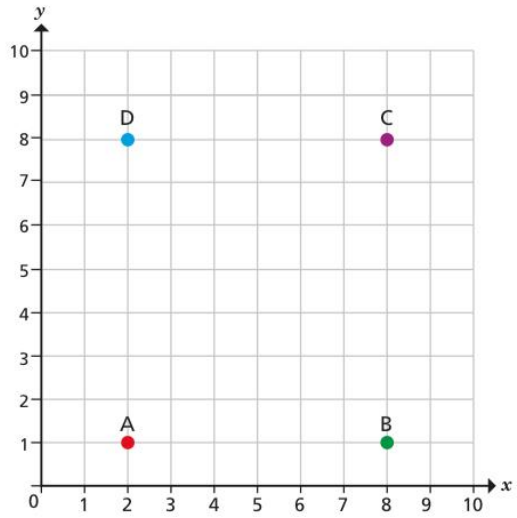
The first quadrant

Watch the video link and answer the following questions

https://vimeo.com/481214525

The first quadrant

1



a) Write the coordinates of the points A, B, C and D.

b) Draw lines to join the points A to D to form a rectangle.

c) Write the coordinates of 4 different points in each column of the table.

Inside the rectangle	Outside the rectangle	On the perimeter of the rectangle
(5, 3)		

2 Here are coordinates for three vertices of a rectangle.

(3, 6) (7, 3) (7, 6)

a) Plot the coordinates on a blank cordinate grid.

b) Write the coordinates of the fourth vertex.

3 Here are coordinates for two vertices of a square.

(5, 2) (5, 6)

What could the coordinates of the other two vertices be?

Give two possible solutions.

4 **a)** Write a set of coordinates that would join to make a right-angled triangle.

b) Write a set of coordinates that would join to make a pentagon.

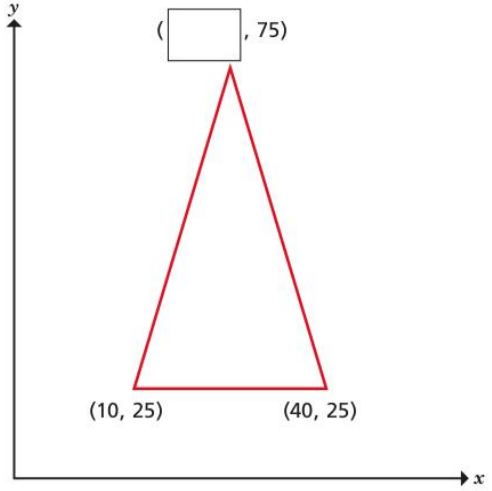
c) Write a set of coordinates that would join to make a trapezium.

d) Plot your points from parts a), b) and c) on a blank coordinate grid to check you are correct.

Compare shapes with a partner.

What is the same? What is different?

5 Complete the coordinate for the isosceles triangle.

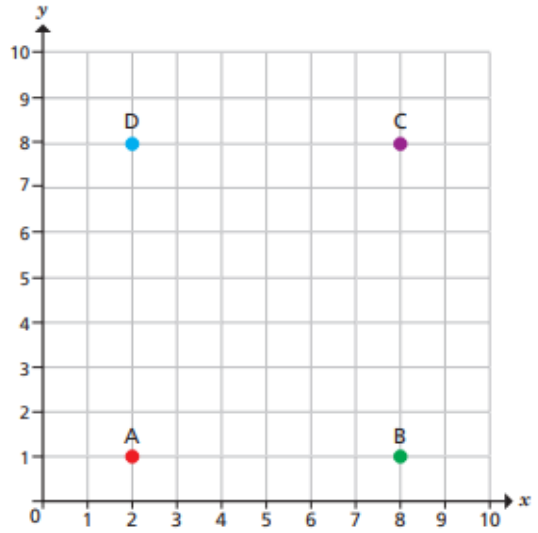


The Answers Are On The Next Slide …..

The first quadrant

Maths

1



a) Write the coordinates of the points A, B, C and D.

A (2 , 1) C (8 , 8)

B (8 , 1) D (2 , 8)

b) Draw lines to join the points A to D to form a rectangle.

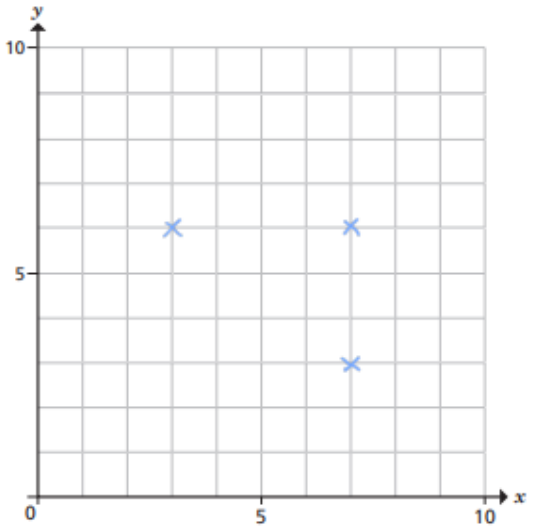
c) Write the coordinates of 4 different points in each column of the table. Various answers.

Inside the rectangle	Outside the rectangle	On the perimeter of the rectangle
(5, 3)		

2 Here are coordinates for three vertices of a rectangle.

(3, 6) (7, 3) (7, 6)

a) Plot the coordinates.



b) Write the coordinates of the fourth vertex.

(3 , 3)

3 Here are coordinates for two vertices of a square.

(5, 2) (5, 6)

What could the coordinates of the other two vertices be?

Give two possible solutions.

(9 , 2) and (9 , 6)

(1 , 2) and (1 , 6)

3 Here are coordinates for two vertices of a square.

(5, 2) (5, 6)

What could the coordinates of the other two vertices be?

Give two possible solutions.

4 **a)** Write a set of coordinates that would join to make a right-angled triangle.

b) Write a set of coordinates that would join to make a pentagon.

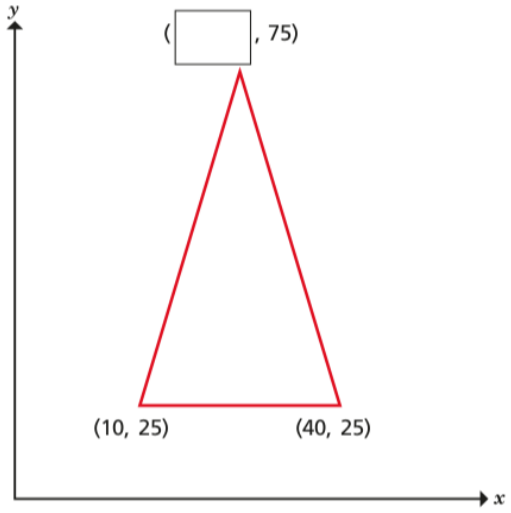
c) Write a set of coordinates that would join to make a trapezium.

d) Plot your points from parts a), b) and c) on a blank coordinate grid to check you are correct.

Compare shapes with a partner.

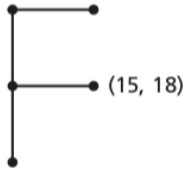
What is the same? What is different?

5 Complete the coordinate for the isosceles triangle.



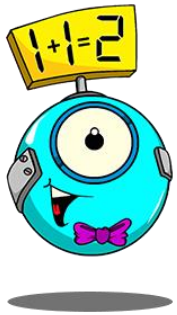
6 Eva has drawn an F on a coordinate grid. One point is labelled.

Suggest possible values for the other points and label them on the diagram.



Compare answers with a partner.

Is there more than one possible set of answers?



CHALLENGE QUESTIONS

The Answers Are On The Next Slide …..

Various answers.

4 **a)** Write a set of coordinates that would join to make a right-angled triangle.

(1,14) (4,14) (1,1)

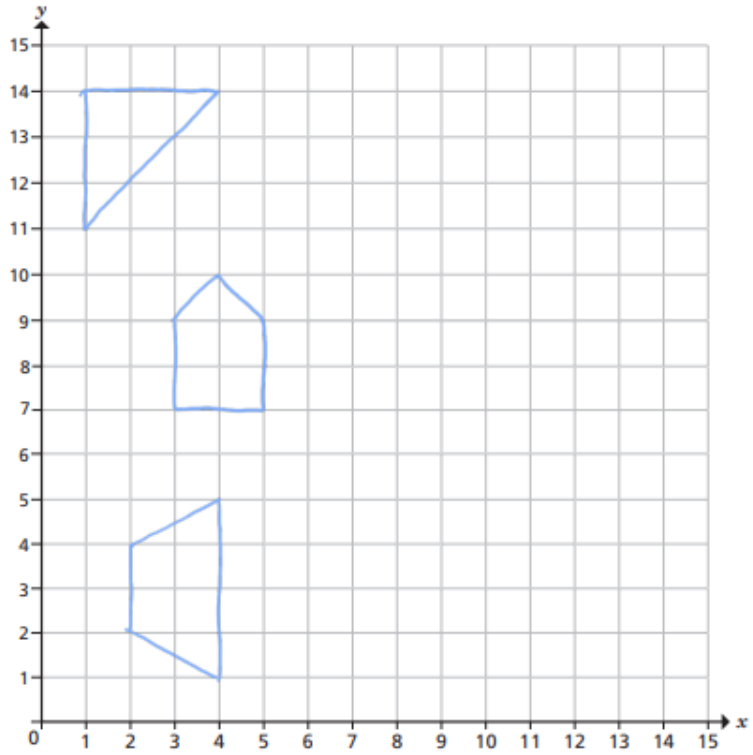
b) Write a set of coordinates that would join to make a pentagon.

(4,10) (3,9) (5,9) (3,7) (5,7)

c) Write a set of coordinates that would join to make a trapezium.

(4,1) (2,2) (2,4) (4,5)

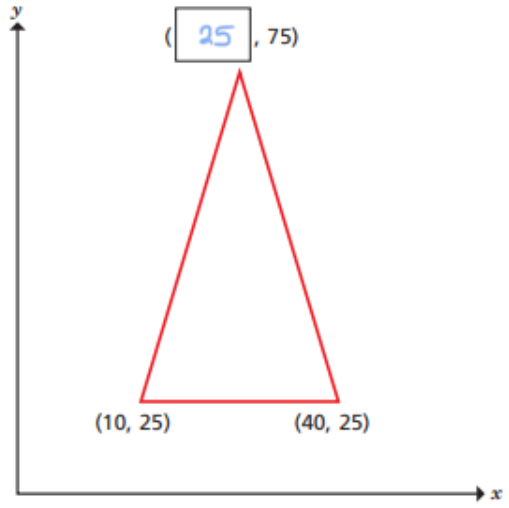
d) Plot your points from parts a), b) and c) to check you are correct.



Compare shapes with a partner.

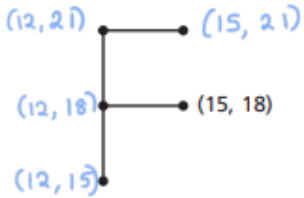
What is the same? What is different?

5 Complete the coordinate for the isosceles triangle.



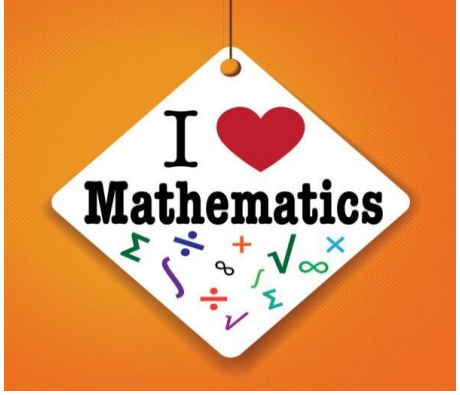
6 Eva has drawn an F on a coordinate grid. One point is labelled.

Suggest possible values for the other points and label them on the diagram. Various answers e.g.



Compare answers with a partner.

Is there more than one possible set of answers?



Tuesday 2nd February

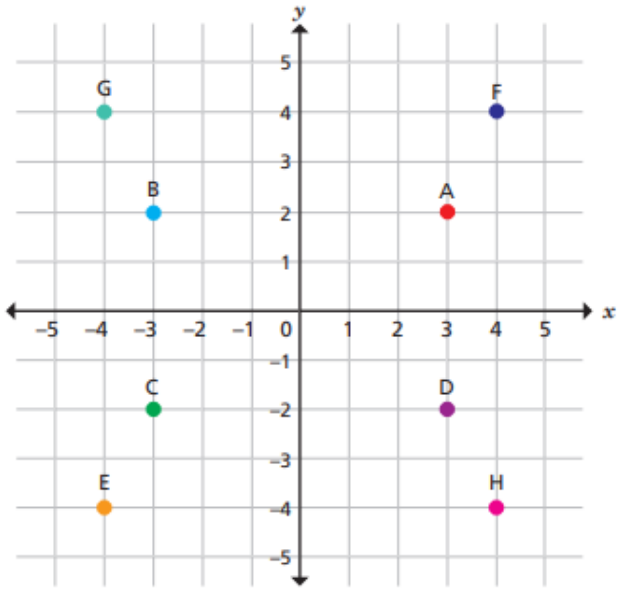
Four quadrants

Watch the video link and answer the following questions

https://vimeo.com/481215270

Four quadrants

1



Write the coordinates of points A to H.

A (___ , ___)

B (___ , ___)

C (___ , ___)

D (___ , ___)

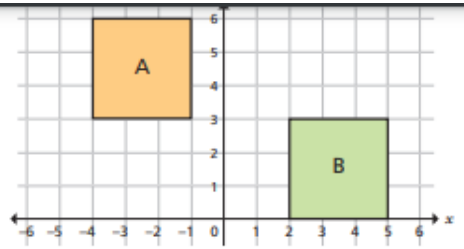
E (___ , ___)

F (___ , ___)

G (___ , ___)

H (___ , ___)

2

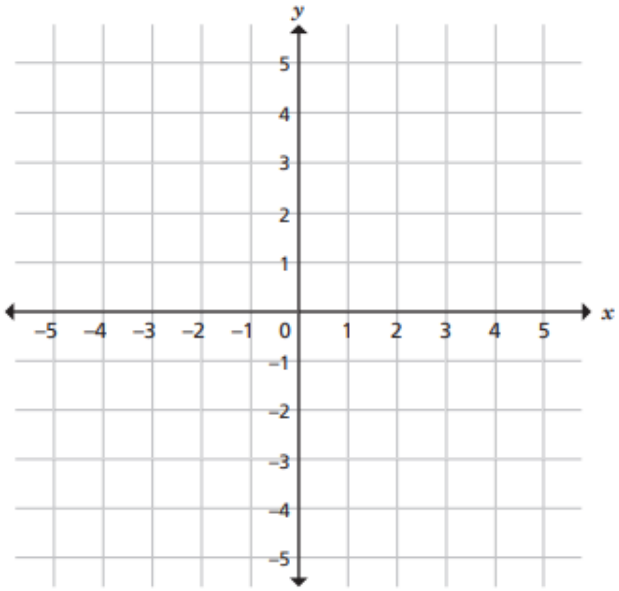


Write the coordinates for each vertex of each square.

square A = _____

square B = _____

3



a) Plot these coordinates.

(–3, 0) (4, 0) (–1, 5) (–1, –5)

b) Join the points you have plotted to form a quadrilateral.

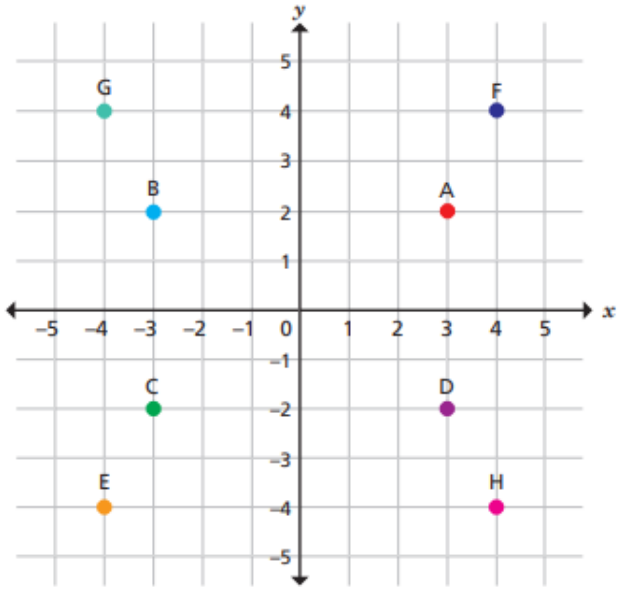
c) Complete the sentence to describe the shape you have drawn.

This quadrilateral is a _____

The Answers Are On The Next Slide …..

Four quadrants

1



Write the coordinates of points A to H.

A (3 , 2)

B (-3 , 2)

C (-3 , -2)

D (3 , -2)

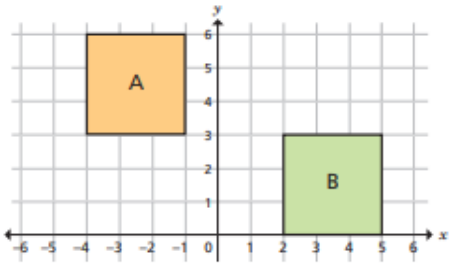
E (-4 , -4)

F (4 , 4)

G (-4 , 4)

H (4 , -4)

2

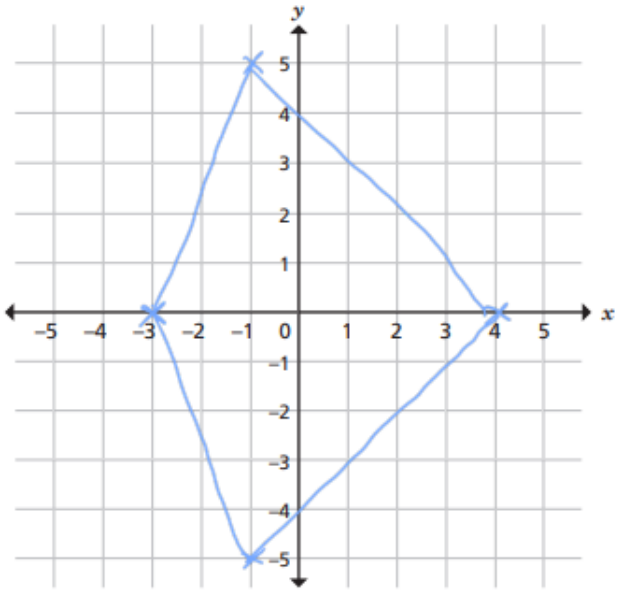


Write the coordinates for each vertex of each square.

square A = (-4,6) (-1,6) (-1,3) (-4,3)

square B = (2,3) (5,3) (2,0) (5,0)

3



a) Plot these coordinates.

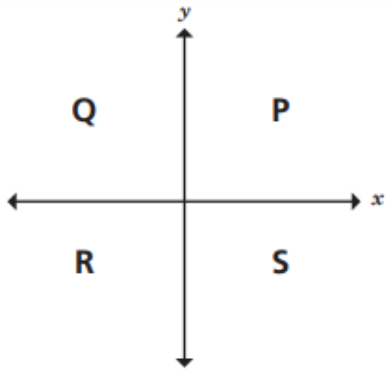
(–3, 0) (4, 0) (–1, 5) (–1, –5)

b) Join the points you have plotted to form a quadrilateral.

c) Complete the sentence to describe the shape you have drawn.

This quadrilateral is a kite

4



a) Write coordinates for 4 possible points in each quadrant.

Quadrant P	Quadrant R
(,) (,) (,) (,)	(,) (,) (,) (,)
Quadrant Q	Quadrant S
(,) (,) (,) (,)	(,) (,) (,) (,)

b) Write 4 different coordinates that are not in any single quadrant.

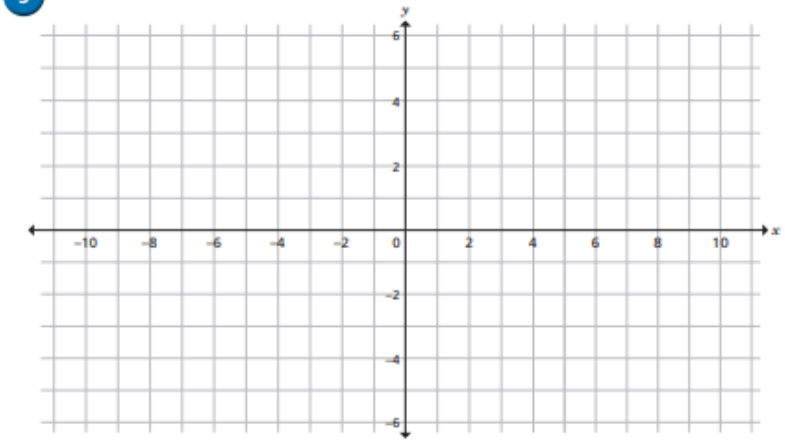
(,) (,)

(,) (,)

What do you notice?

CHALLENGE QUESTIONS

5

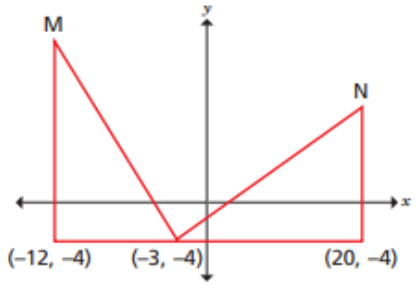


a) Plot these coordinates.

(–8, 4) (4, –2) (10, –5) (–4, 2) (–6, 3)

b) Write three other coordinates that would be in the same line.

6 The diagram shows two identical triangles.

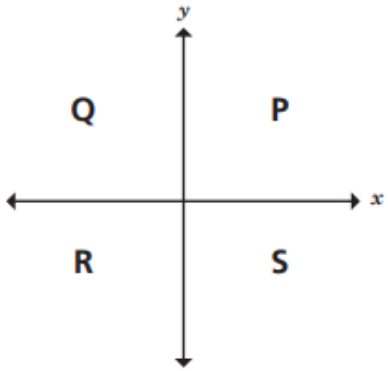


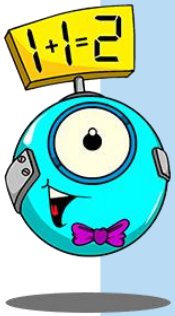
Write the coordinates of points M and N.

M (,) N (,)

The Answers Are On The Next Slide …..

4





Various answers.

a) Write coordinates for 4 possible points in each quadrant.

Quadrant P		Quadrant R	
(2, 4)	(71, 60)	(-4, -11)	(-1, -1)
(3, 1)	(5, 17)	(-19, -27)	(-8, -9)
Quadrant Q		**Quadrant S**	
(-7, 11)	(-4, 1)	(2, -5)	(30, -4)
(-5, 21)	(-100, 2)	(17, -12)	(6, -1)

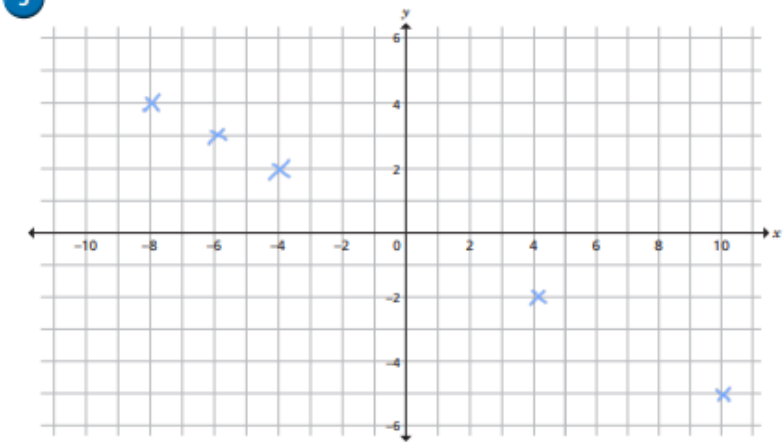
b) Write 4 different coordinates that are not in any single quadrant.

(3, 0) (0, 0)

(0, 4) (-7, 0)

What do you notice?

5



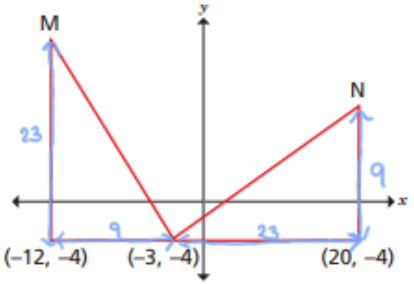
a) Plot these coordinates.

(–8, 4) (4, –2) (10, –5) (–4, 2) (–6, 3)

b) Write three other coordinates that would be in the same line.

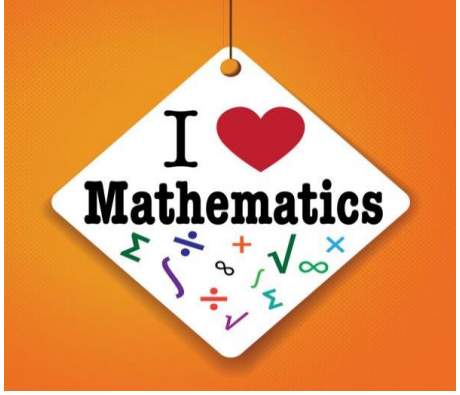
(-2, 1) (0, 0) (2, -1)

6 The diagram shows two identical triangles.



Write the coordinates of points M and N.

M (-12, 19) N (20, 5)



Wednesday 3rd February

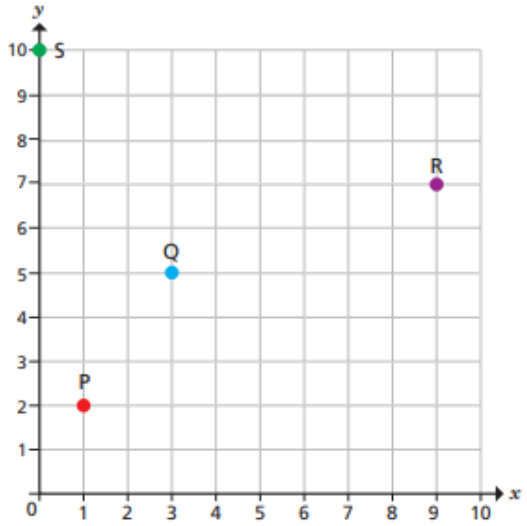
Translations

Watch the video link and answer the following questions

https://vimeo.com/481216178

Translations

1



Describe the translations.

a) From P to Q is ☐ right and ☐ up

b) From Q to R is ☐ right and ☐ up

c) From R to S is ☐ left and ☐ up

d) From S to P is ☐ _____ and ☐ _____

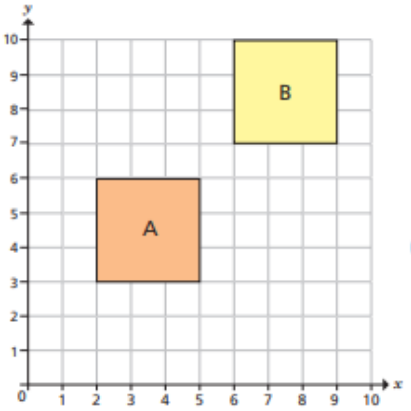
e) From Q to P is ☐ _____ and ☐ _____

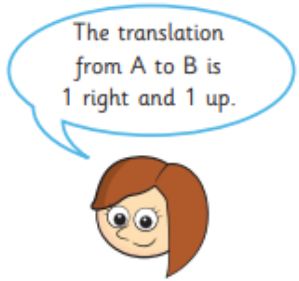
f) From R to Q is ☐ _____ and ☐ _____

g) From S to R is ☐ _____ and ☐ _____

h) From P to S is ☐ _____ and ☐ _____

2





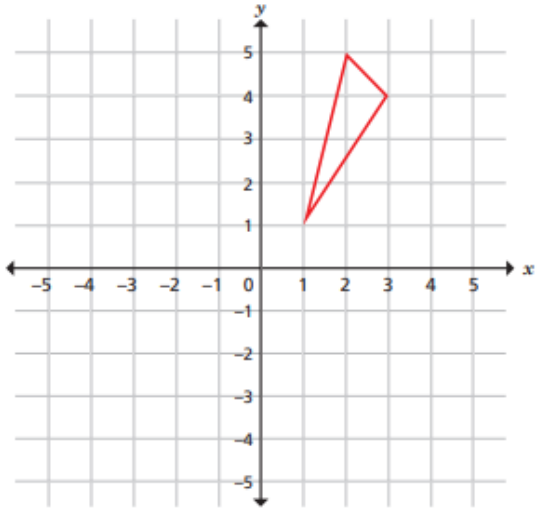
Do you agree with Rosie? _____

Explain your answer.

_____

_____

3 Translate the triangle 6 left.

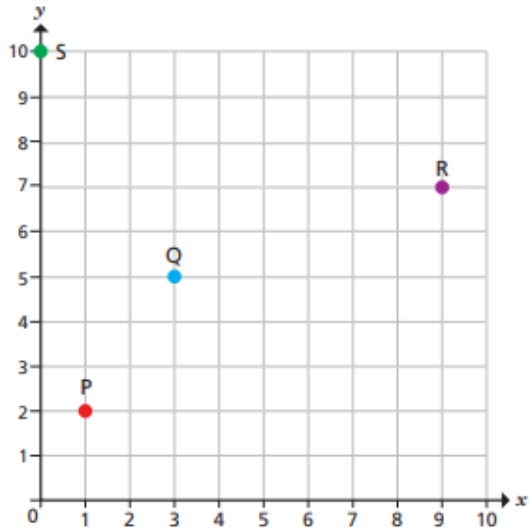


The Answers Are On The Next Slide …..

Translations

Maths

1



Describe the translations.

a) From P to Q is 2 right and 3 up

b) From Q to R is 6 right and 2 up

c) From R to S is 9 left and 3 up

d) From S to P is 1 right and 8 down

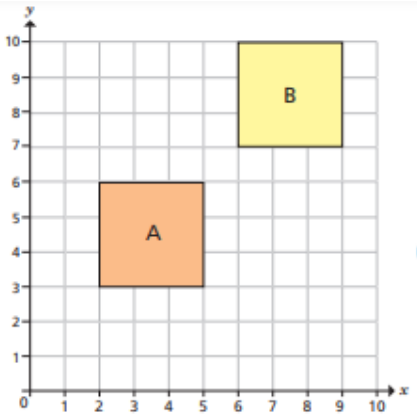
e) From Q to P is 2 left and 3 down

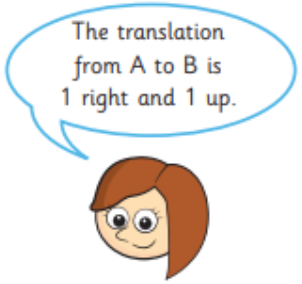
f) From R to Q is 6 left and 2 down

g) From S to R is 9 right and 3 down

h) From P to S is 1 left and 8 up

2



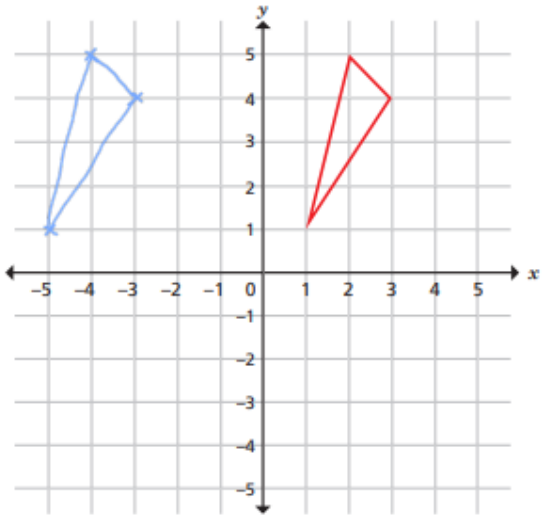


Do you agree with Rosie? No

Explain your answer.

She has looked at the corners closest to each other not the corresponding corners on each shape.

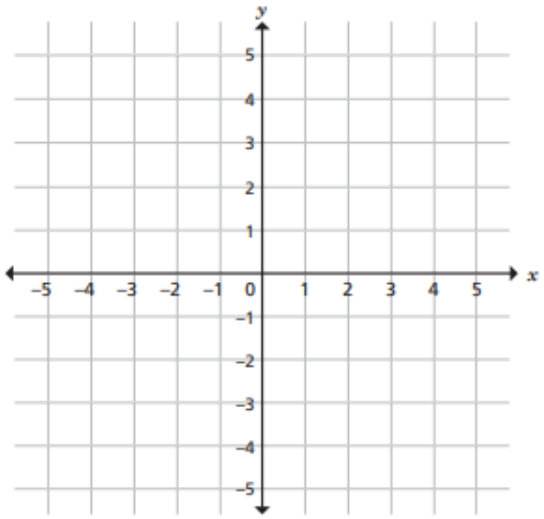
3 Translate the triangle 6 left.



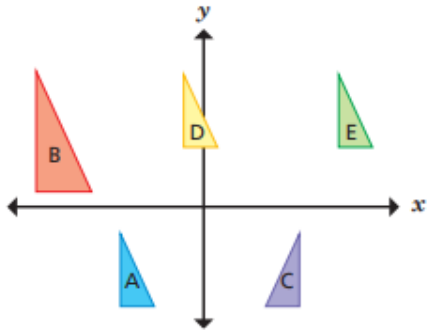
4 These coordinates form a quadrilateral: (–5, 5), (–5, 1), (–1, 4), (–1, 2)

It is translated 3 right and 4 down.

Draw the quadrilateral on the grid in its **new** position.

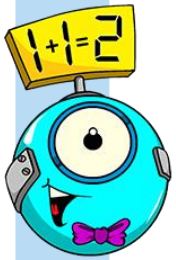


5



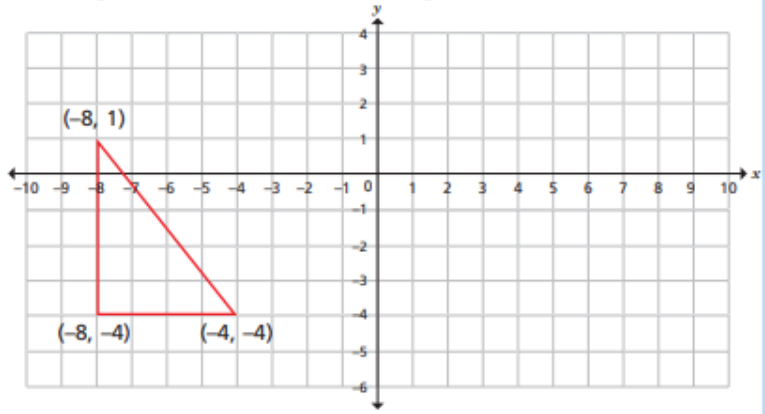
Which triangles are translations of each other?

Explain why the others are not translations.



CHALLENGE QUESTIONS

6 A triangle is drawn on the coordinate grid.

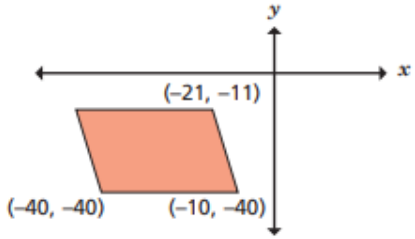


a) Translate the triangle 9 right and 1 down.

b) Tick the correct box for each coordinate.

Point	Inside the new triangle	Outside the new triangle	On the perimeter of the new triangle
(0, 0)			
(4, –5)			
(2, –1)			
(–6, –3)			
(3, –4)			

7



This parallelogram has been translated 50 left and 25 down.

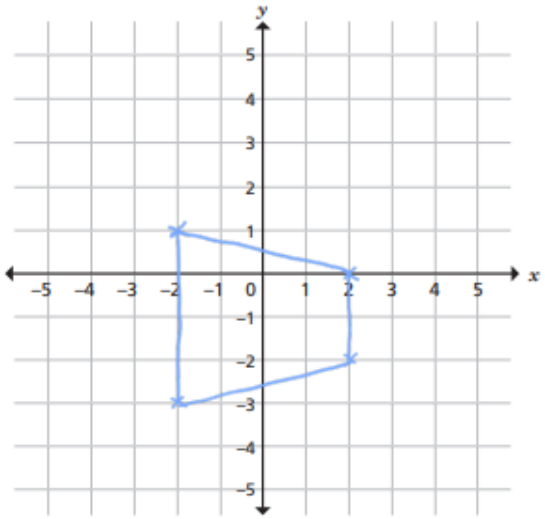
What were the coordinates of **all four** vertices before it was translated?

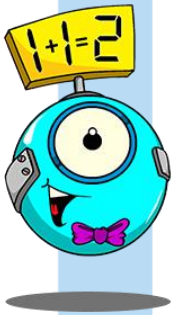
The Answers Are On The Next Slide …..

4 These coordinates form a quadrilateral: (–5, 5), (–5, 1), (–1, 4), (–1, 2)

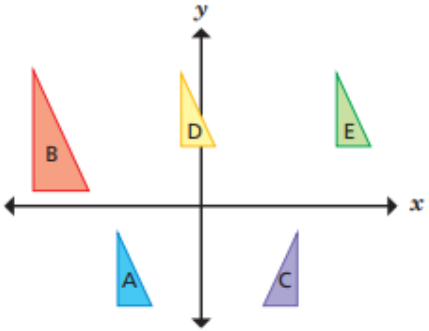
It is translated 3 right and 4 down.

Draw the quadrilateral on the grid in its **new** position.





5

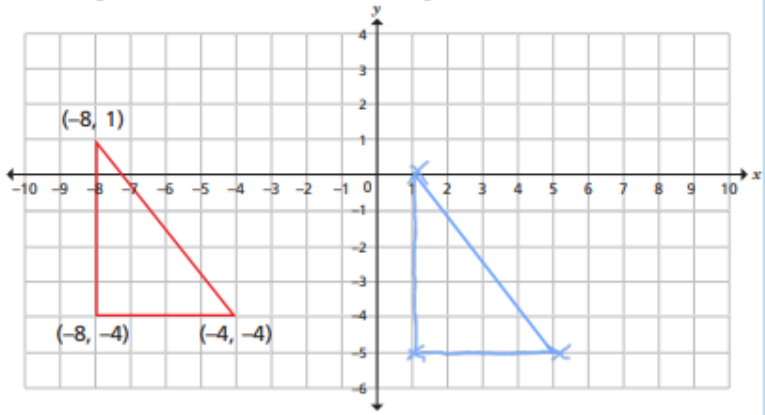


Which triangles are translations of each other?

A, D and E

Explain why the others are not translations.

6 A triangle is drawn on the coordinate grid.

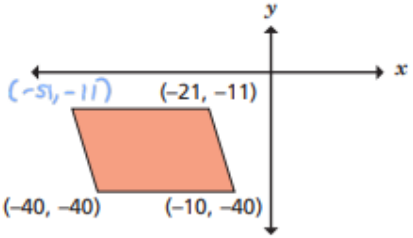


a) Translate the triangle 9 right and 1 down.

b) Tick the correct box for each coordinate.

Point	Inside the new triangle	Outside the new triangle	On the perimeter of the new triangle
(0, 0)		✓	
(4, –5)			✓
(2, –1)		✓	
(–6, –3)		✓	
(3, –4)	✓		

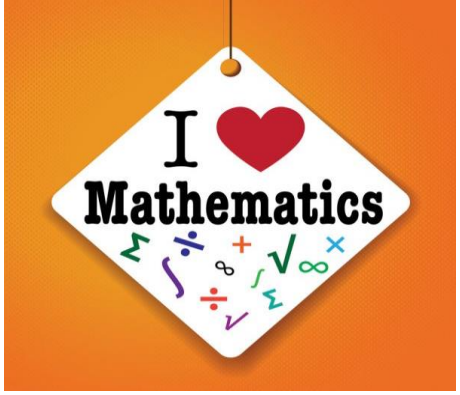
7



This parallelogram has been translated 50 left and 25 down.

What were the coordinates of **all four** vertices before it was translated?

(–1, 14) (29, 14) (10, –15) (40, –15)



Thursday 4th February

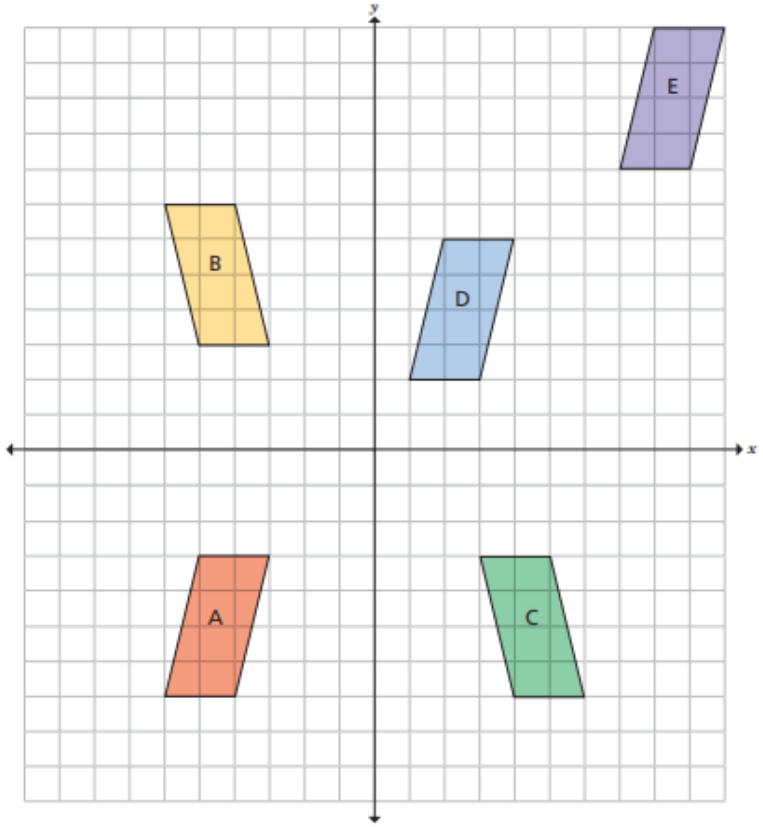
Reflections

Watch the video link and answer the following questions

https://vimeo.com/481620188

Reflections

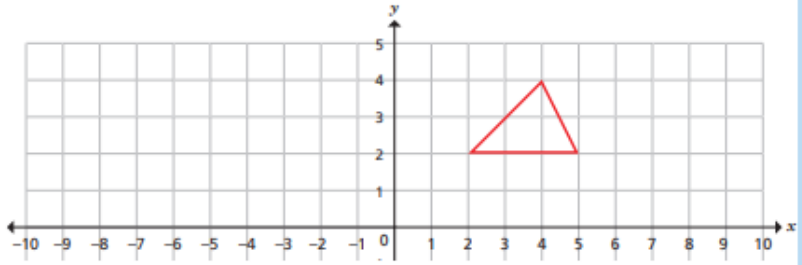
1 Five parallelograms are shown on the coordinate grid.



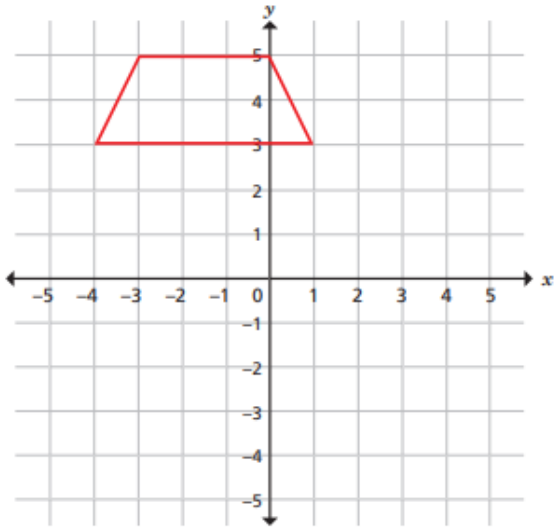
a) Tick the shapes that are translations of shape A.

b) Circle the shapes that are reflections of shape A.

2 Reflect the triangle in the y-axis.



3



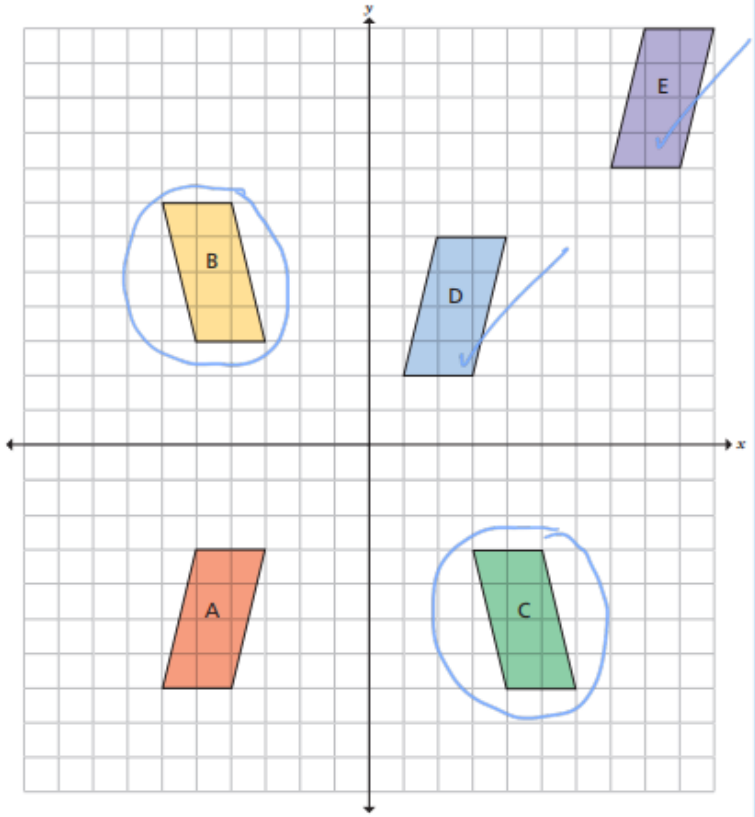
a) What is the name of the shape plotted on the grid?

b) Reflect the shape in the x-axis.

The Answers Are On The Next Slide …..

Reflections

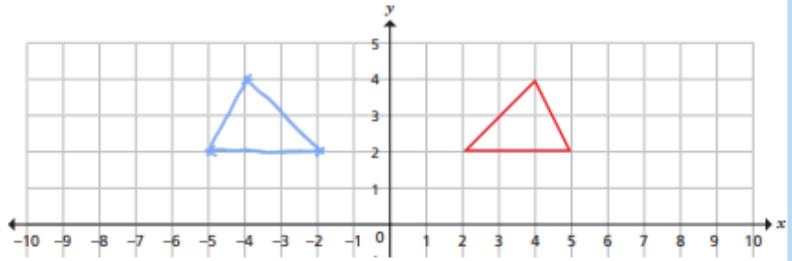
1 Five parallelograms are shown on the coordinate grid.



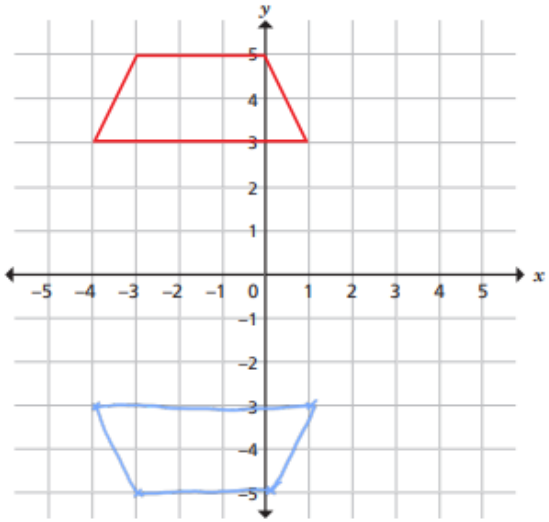
a) Tick the shapes that are translations of shape A.

b) Circle the shapes that are reflections of shape A.

2 Reflect the triangle in the y-axis.



3

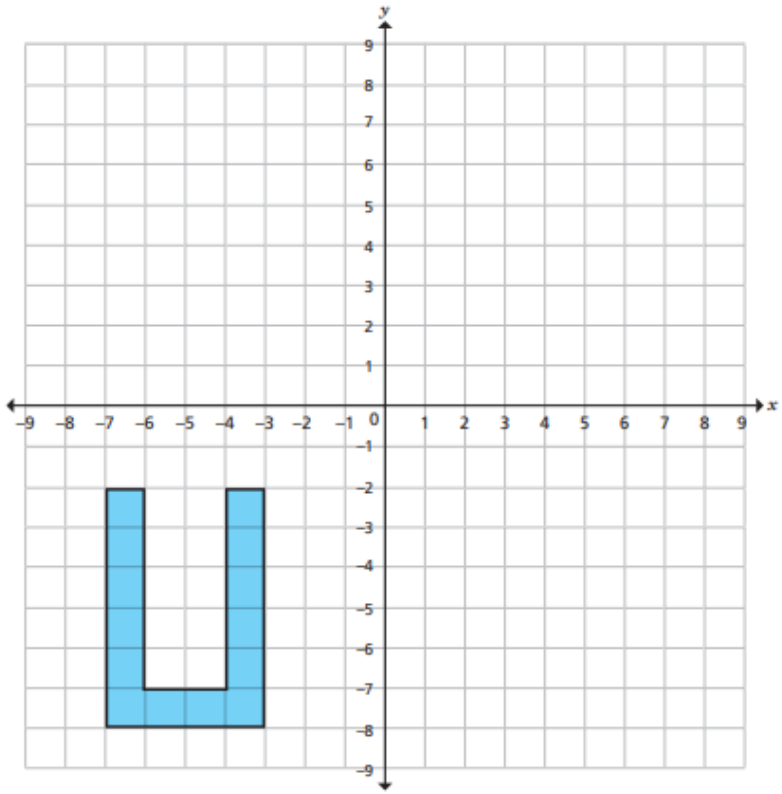


a) What is the name of the shape plotted on the grid?

Trapezium

b) Reflect the shape in the x-axis.

4 An octagon is shown on the coordinate grid.



a) Reflect the shape in the x-axis.

b) Translate the new shape 10 right and 10 down.

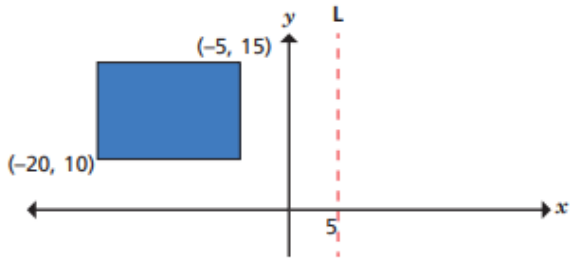
c) Reflect the new shape in the x-axis.

d) What do you notice?

e) Create a similar question for your partner to complete.

CHALLENGE QUESTIONS

5 The shape is reflected in the line marked L.



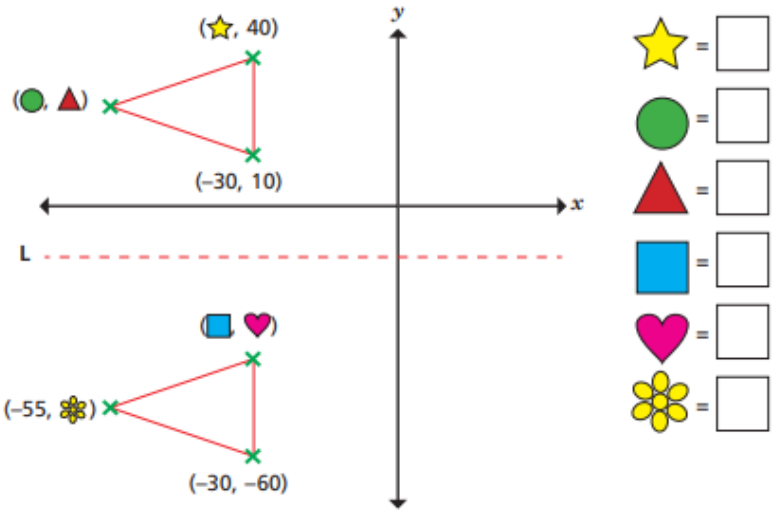
Work out the coordinates of the new vertices.

The new vertices are at

(,) (,) (,) (,)

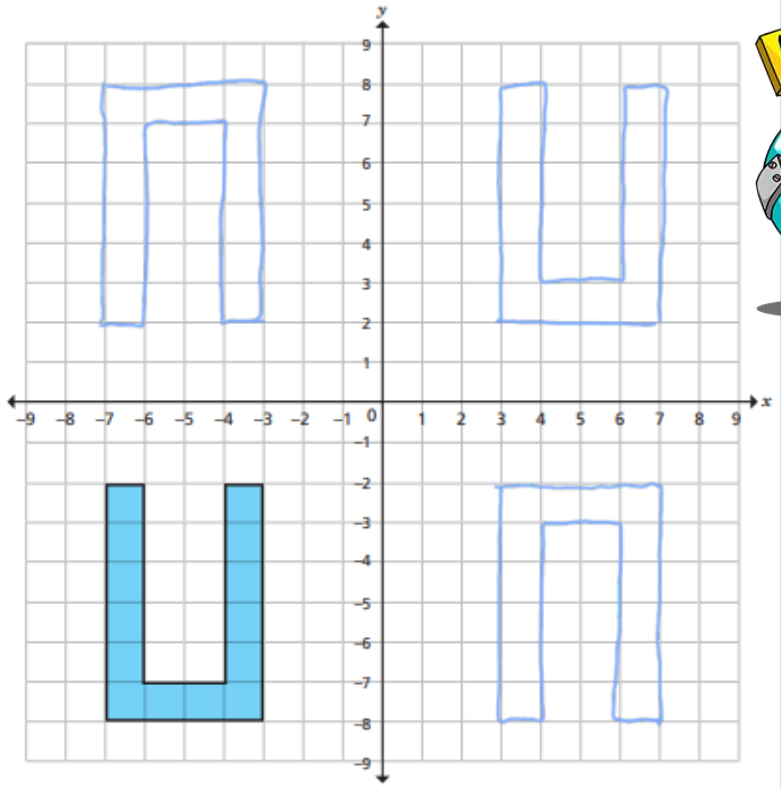
6 The isosceles triangle has been reflected in the line marked L.

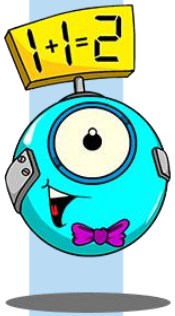
Work out the missing values.



The Answers Are On The Next Slide …..

4 An octagon is shown on the coordinate grid.





a) Reflect the shape in the x-axis.

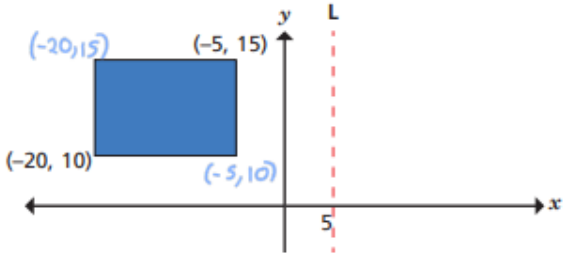
b) Translate the new shape 10 right and 10 down.

c) Reflect the new shape in the x-axis.

d) What do you notice?

e) Create a similar question for your partner to complete.

5 The shape is reflected in the line marked L.



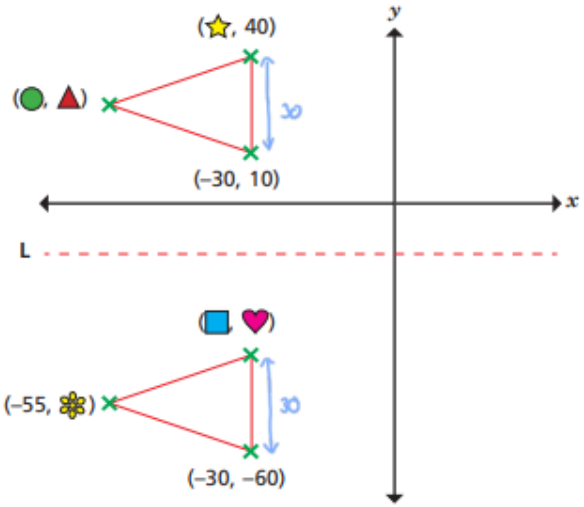
Work out the coordinates of the new vertices.

The new vertices are at

(15 , 10) (15 , 15) (30 , 10) (30 , 15)

6 The isosceles triangle has been reflected in the line marked L.

Work out the missing values.



☆ = -30

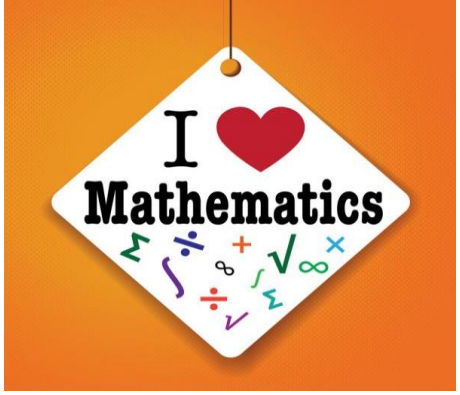
● = -55

▲ = 25

■ = -30

♥ = -30

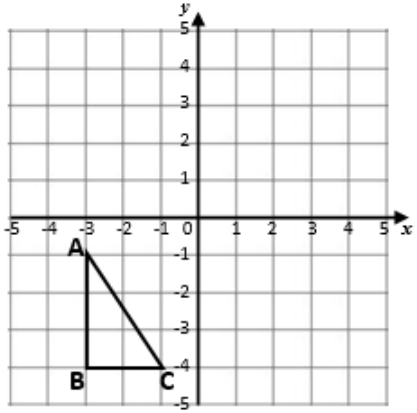
✿ = -45



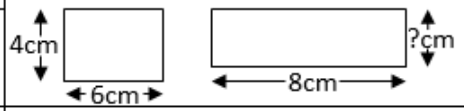
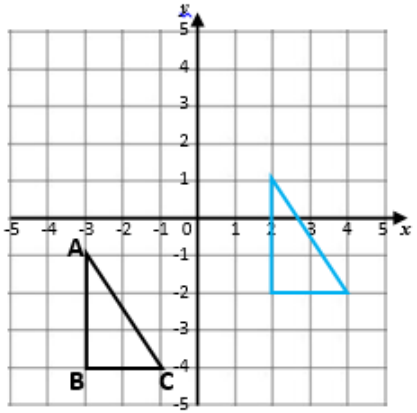
Friday 5th February

Skills Check

Name: _____ **Date:** _____ **Class/Group:** _____

A: Place Value, Add, Subtract, Multiply and Divide		B: Fractions, Ratio, Proportion and Algebra		C: Measure, Position and Direction	
1. Write in words: **2,034,601**	*6:1*	11. Simplify this fraction fully: $\frac{18}{54}$	*6:7*	21. 400ml of water are poured out of a 2.25 litre bottle. How much is left?	*6:18/19*
2. What is the value of the **3** in this number? 1,384,721	*6:1*	12. $1\frac{2}{3} - \frac{3}{4} =$	*6:8*	22. How many hours are there in three days?	*6:19*
3. Round 7.186 to the nearest whole number.	*6:1*	13. $\frac{1}{3} \div 3 =$	*6:9*	23. **These rectangles have the same area. Find the missing side length.** 	*6:20*
4. The temperature drops from 1°C to -11°C. What is the difference?	*6:2*	14. What is the value of the **8** in this number: 25.738	*6:10*		
5. 2,140 x 32	*6:3*	15. Give your answer as a decimal: 26 ÷ 8	*6:11*	24. **What are the co-ordinates of A?** 	*6:27*
6. 7,242 ÷ 17	*6:3*	16. Write this fraction as a **decimal** and a **percentage**. $\frac{1}{2}$	*6:12*		
7. 15 and 27 only have two **common factors**. What are they?	*6:4*	17. Find **75%** of 520.	*6:13*		
8. The number 30 has **three prime factors**. What are they?	*6:4*	18. The ratio of cats to dogs 3:2. If there are 15 cats, how many dogs?	*6:14*		
9. (25 + 13) ÷ 2	*6:5*	19. I have **m** pence. I spend 17p. Write an expression for this.	*6:15*		
10. How many 52-seater buses does a school need for 198 pupils and staff?	*6:6*	20. Write a possible value for **a** and **b**. 2 x **a** + **b** = 17	*6:17*	25. **Translate triangle ABC 5 units right and 2 units up.**	*6:28*
Total (A)		Total (B)		Total (C)	
Test Total (A+B+C)		R (0-9)	Y (10-19)	G (20-25)	

The Answers Are On The Next Slide …..

A: Place Value, Add, Subtract, Multiply and Divide			B: Fractions, Ratio, Proportion and Algebra		C: Measure, Position and Direction	
1. Write in words: **2,034,601**	*6:1* **Two million, thirty four thousand, six hundred and one.**		11. Simplify this fraction fully: $\frac{18}{54}$	*6:7* $\frac{1}{3}$	21. 400ml of water are poured out of a 2.25 litre bottle. How much is left?	*6:18/19* **1.85l or 1,850ml**
2. What is the value of the **3** in this number? 1,384,721		*6:1* **300,000**	12. $1\frac{2}{3} - \frac{3}{4} =$	*6:8* $\frac{11}{12}$	22. How many hours are there in three days?	*6:19* **72**
3. Round 7.186 to the nearest whole number.		*6:1* **7**	13. $\frac{1}{3} \div 3 =$	*6:9* $\frac{1}{9}$	**23. These rectangles have the same area. Find the missing side length.** 	*6:20* **3**
4. The temperature drops from 1°C to -11°C. What is the difference?		*6:2* **12°C**	14. What is the value of the **8** in this number: 25.738	*6:10* $\frac{8}{1000}$		
5. 2,140 x 32		*6:3* **68,480**	15. Give your answer as a decimal: 26 ÷ 8	*6:11* **3.25**	**24. What are the co-ordinates of A?** 	*6:27* **(-3,-1)**
6. 7,242 ÷ 17		*6:3* **426**	16. Write this fraction as a **decimal** and a **percentage**. $\frac{1}{2}$	*6:12* **0.5, 50%**		
7. 15 and 27 only have two **common factors**. What are they?		*6:4* **1 and 3**	17. Find **75%** of 520.	*6:13* **390**		
8. The number 30 has **three prime factors**. What are they?		*6:4* **2, 3, and 5**	18. The ratio of cats to dogs 3:2. If there are 15 cats, how many dogs?	*6:14* **10**		
9. (25 + 13) ÷ 2		*6:5* **19**	19. I have **m** pence. I spend 17p. Write an expression for this.	*6:15* **m – 17**		
10. How many 52-seater buses does a school need for 198 pupils and staff?		*6:6* **4**	20. Write a possible value for **a** and **b**. 2 x **a** + **b** = 17	*6:17* **Any 2 that work**	**25. Translate** triangle **ABC** 5 units right and 2 units up.	*6:28*
Total (A)			Total (B)		Total (C)	
Test Total (A+B+C)			R (0-9)	Y (10-19)	G (20-25)	