Activity 1

LO: To identify and compare the different angles.

Core skill
Watch the video about the different types of angles to refresh your knowledge.
https://watchkin.com/58ab4956e9

Complete the table with missing information.

Use the information below:
- **Right angle**
- **An angle that is more than 90° but less than 180°.**
- **An angle that is less than 90°.**

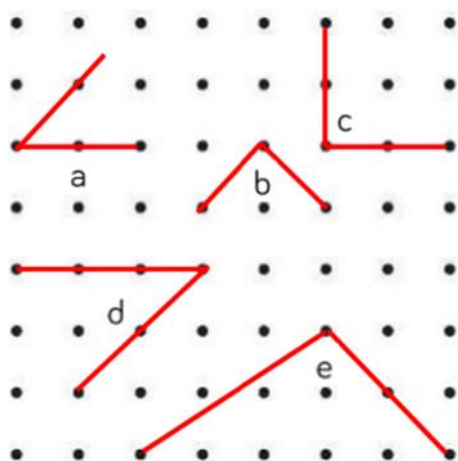| Angle	Description	Draw the angle
Acute		
	An angle that is exactly 90°.	
Obtuse		

Depth Task – Write the information into the table underneath the correct heading.

88°	One hundred degrees	90°	One hundred and thirty degrees	179°	Five degrees
Eleven degrees	126°	Forty five degrees	150°	Ninety degrees	69°

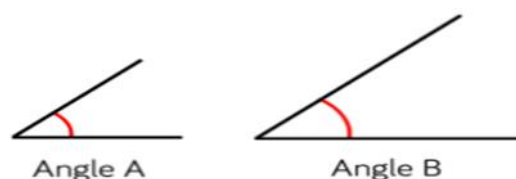| Acute angle	Obtuse angle	Right angle

Greater Depth 1
Here are five angles. There are two pairs of identically sized angles. Which angle is the odd one out? Explain your reason.

Greater Depth 2
Rod has two angles A and B. He says that angle B is bigger than angle A because it has longer sides. Do you agree with Ron? Explain your answer.
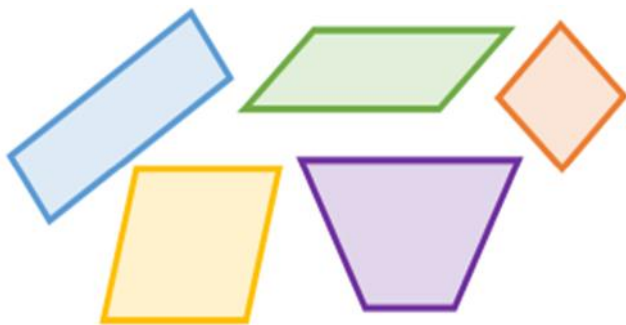

Angle A   Angle B

Angle B is bigger than Angle A because it has longer sides.

Ron

Activity 2

LO: To compare and classify quadrilaterals based on their properties and sizes.

Core skill - Label the quadrilaterals using the word bank.
Watch the video to help you identify the quadrilaterals.
https://watchkin.com/c06a33016b

Word bank

) Rhombus

) Square

) Parallelogram

) Rectangle

) Trapezium

Write the properties for these 5 quadrilaterals into your book.
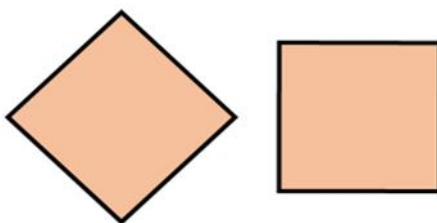Parallel lines are lines that never meet. Watch the video to remind yourself of the vocabulary.
https://watchkin.com/4838650bb5

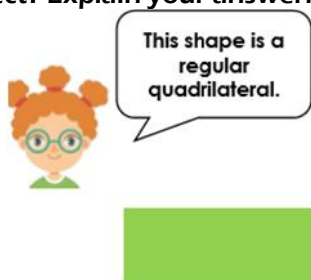| Name	Types of angles	Parallel lines	Equal sides
Rhombus			
Square			
Parallelogram			
Rectangle			
Trapezium			

Depth Task
What is the same about these two shapes and what is different?

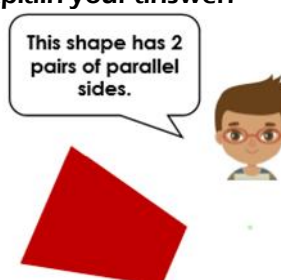**Greater Depth 1**
Sophie thinks that the shape matches her statement.
Is she correct? Explain your answer.

This shape is a regular quadrilateral.

Greater Depth 2
Robert thinks that the shape matches his statement.
Is he correct? Explain your answer.

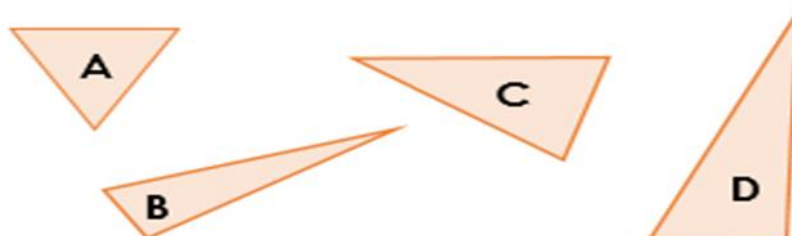This shape has 2 pairs of parallel sides.

Activity 3

LO: To compare and classify triangles based on their properties and sizes.

Core skill - What the video to refresh your knowledge about different triangles.
https://watchkin.com/2f1f778ad3

Sort the triangles underneath the correct headings. Use a ruler to measure the length of each side.

Scalene	Isosceles	Equilateral

Depth task 1

1. What are the differences between these two triangles?
2. What is similar about them?

Depth task 2

Read these statements. Explain why they are true or false.

- A scalene triangle never has equal length sides.
- An isosceles triangle can never have a right angle.
- An isosceles triangle has three equal angles.
- An equilateral triangle has three equal length sides.

Greater Depth 1

Draw the shape using the description below:
- 2 pairs of equal sides
- No right angles
- Not a parallelogram

What shape have you drawn?

Greater Depth 2

Draw the shape using the description below:
- 1 pair of equal sides
- 1 pair of parallel lines (unequal in length)
- No right angles

What shape have you drawn?

Activity 4

LO: To plot specified points and draw sides to complete a given polygon.

Watch the video that explains how to read coordinates. https://watchkin.com/7eb787968f
"Along the corridor x-axis, up the stairs y-axis"

Core skill
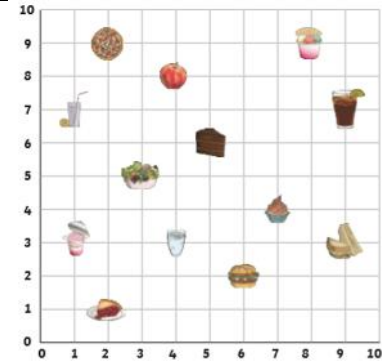**Use the coordinates to find out what is on the menu.**

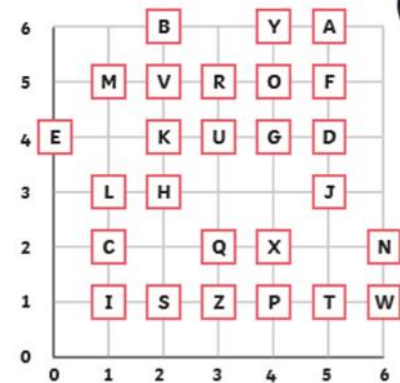(2,9) = _____
(4,3) = _____
(5,6) = _____
(6,2) = _____
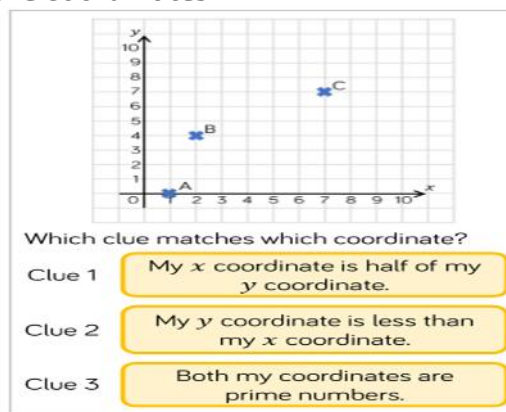(9,7) = _____
(1,3) = _____

Write down the letter at each coordinate to find out what items were ordered at the café.

1. (2,6) (3,4) (3,5) (4,4) (0,4) (3,5) = _____
2. (5,3) (3,4) (1, 1) (1, 2) (0,4) = _____
3. (1,2) (5,6) (2,4) (0,4) = _____
4. (1,5) (1, 1) (1,3) (2,4) (2,1) (2,3) (5,6) (2,4) (0,4) = _____

Depth – Match the clues with the coordinates.

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.

Greater Depth 1

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.
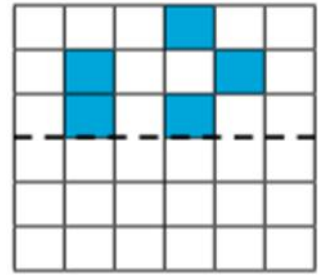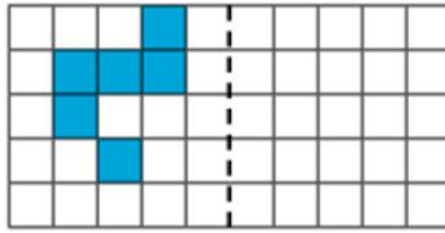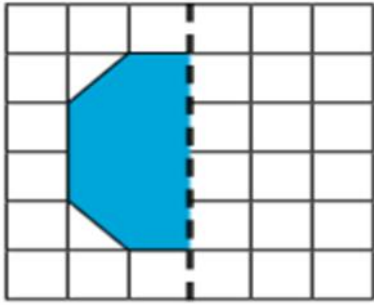
Amir

Do you agree with Amir? Explain it.

Activity 5

LO: To complete a simple symmetric figure with respect to a specific line of symmetry.
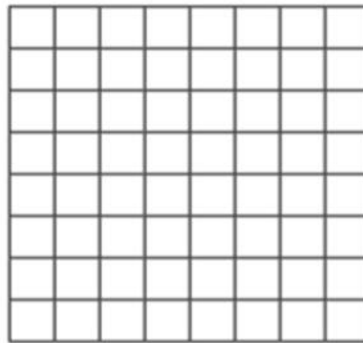
Core skill - Complete the symmetric figure, or pattern by shading the correct squares. Remember to check your answer with a mirror.
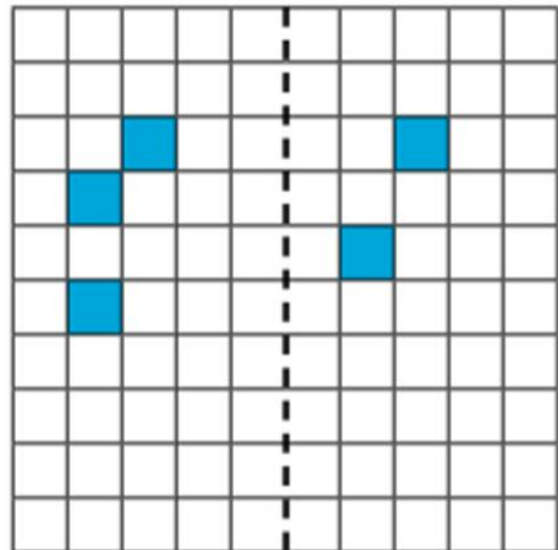
Depth task

Carrie says, "A symmetrical pattern on a grid cannot have more than <u>two lines of symmetry</u>." **Is she correct?**

1. Draw your own pattern, with <u>more than two lines of symmetry</u>.
2. Can you shade the squares to create a pattern on a grid?

Greater Depth

a) **What is the smallest number of squares you would have to shade to make a symmetrical pattern, if the line of symmetry was vertical as shown here?**

b) **Draw a horizontal or diagonal line of symmetry on the grid and shade the fewest squares you can to make a symmetrical pattern.**

c) **Are there places on the grid where the line of symmetry can't go? Explain your answer.**

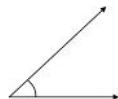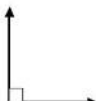**Answers**

Activity 1

Core skills

Complete the table with missing information.
Use the information below:
- Right angle
- An angle that is more than 90° **but less than 180°.**
- An angle that is less than 90°.

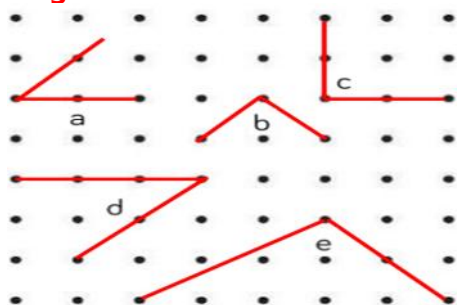| Angle	Description	Draw the angle
Acute	An angle that is less than 90°	
Right angle	An angle that is exactly 90°	
Obtuse	An angle that is more than 90° but less than 180°	

Depth task

| 88° | One hundred degrees | 90° | One hundred and thirty degrees | 179° | Five degrees |
| Eleven degrees | 126° | Forty five degrees | 150° | Ninety degrees | 69° |

Acute angle	Obtuse angle	Right angle
Five degrees Eleven degrees Forty five degrees 69° 88°	One hundred degrees 126° One hundred and thirty degrees 150° 179°	Ninety degrees 90°

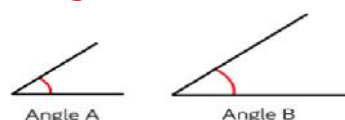## Greater Depth 1

- Angle e is the odd one out because it is an Obtuse angle.
- Angle b and c are both Right angles.
- Angle a and d are both Acute angles.

Greater Depth 2

Angle A and B are the same size because they are both Acute angles.
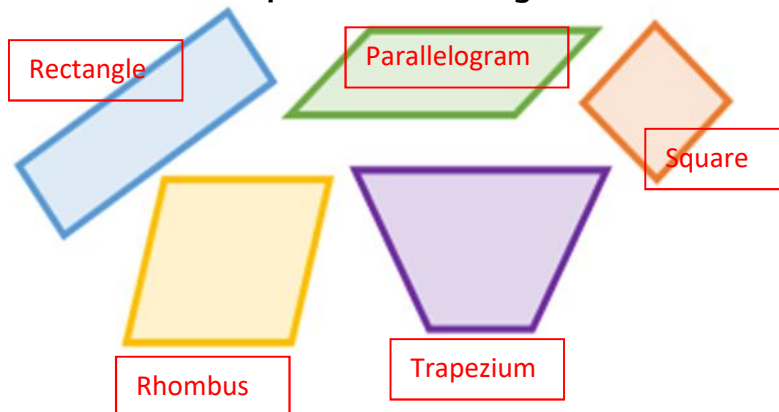The length of the sides doesn't show how big an angle is.

Angle A   Angle B

Angle B is bigger than Angle A because it has longer sides.

Ron

Activity 2

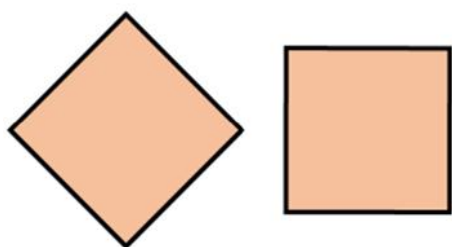**Core skill - Label the quadrilaterals using the word bank.**

Rectangle

Parallelogram

Square

Rhombus

Trapezium

Core skill - Write the properties for these 5 quadrilaterals into your book.

Name	Types of angles	Parallel lines	Equal sides
Rhombus	2 acute 2 obtuse	Opposite sides are parallel 2	4
Square	4 right angles	Opposite sides are parallel 2	4
Parallelogram	2 acute 2 obtuse	Opposite sides are parallel 2	2
Rectangle	4 right angles	Opposite sides are parallel 2	4
Trapezium	2 acute 2 obtuse	1	2

Depth Task

What is the same about these two shapes and what is different?

Same: 4 equal sides and 4 right angles
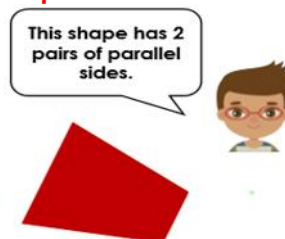**Different: orientation (direction)**

Greater Depth

Sophie is incorrect as a regular quadrilateral must have all sides and angles equal and a rectangle does not have all sides equal.
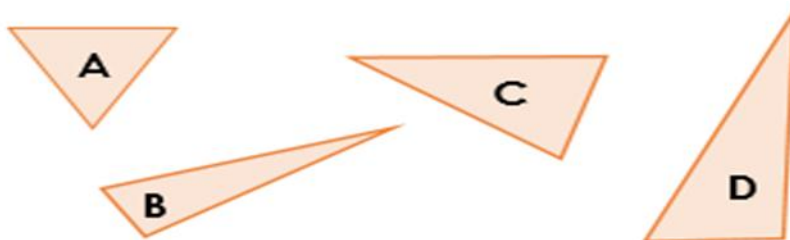
This shape is a regular quadrilateral.

Greater Depth

Robert is incorrect as a trapezium only has 1 pair of parallel sides.

This shape has 2 pairs of parallel sides.

Activity 3

Core skill
Sort the triangles under the correct headings

Scalene	Isosceles	Equilateral
D	B, C	A

Depth task

1. What are the differences between these two triangles?
   A has a right angle.
   A has shorter sides.
   B has taller sides.

2. What is similar about them?
   They are both are isosceles triangles.

Read these statements. Explain why they are true or false.

- A scalene triangle never has equal length sides. True all the sides are different lengths.
- An isosceles triangle can never have a right angle. False
- An isosceles triangle has three equal angles. False only two sides are the same length.
- An equilateral triangle has three equal length sides. True

Greater Depth 1

Draw the shape using the description below:
- 2 pairs of equal sides
- No right angles
- Not a parallelogram

What shape have you drawn?
Rhombus

Greater Depth 2

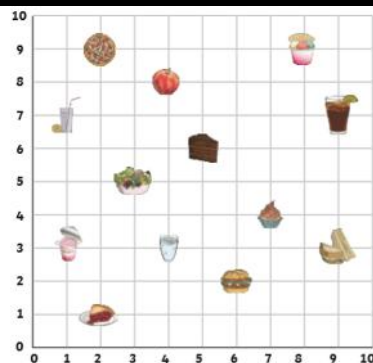Draw the shape using the description below:
- 1 pair of equal sides
- 1 pair of parallel lines (unequal in length)
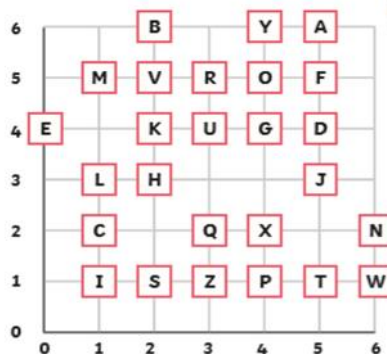- No right angles

What shape have you drawn? Trapezium

Activity 4

Core skill

(2,9) pizza   (6,2) burger

(4,3) water   (9,7) cola

(5,6) choc cake   (1,3) yoghurt
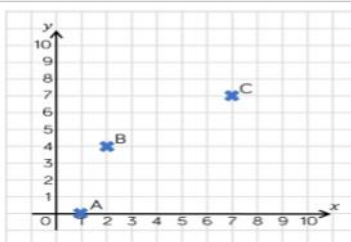

1. burger
2. juice
3. cake
4. milkshake

Depth task

Clue 1 = B
Clue 2 = A
Clue 3 = C

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.

Greater Depth task

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.
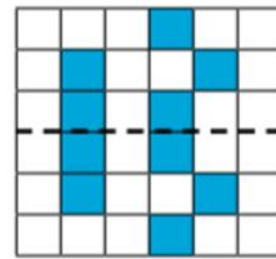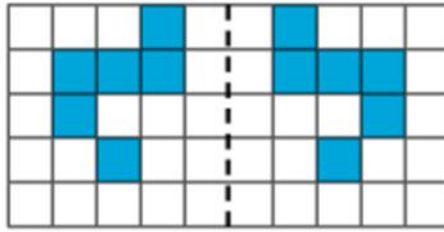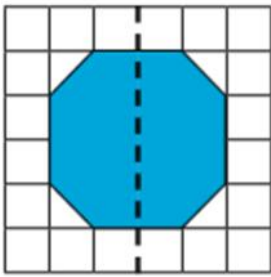
Amir

Amir is incorrect.
The x-axis must be plotted before the y-axis.

Activity 5

Core Skill

Depth task

Carrie says, "A symmetrical pattern on a grid cannot have more than <u>two lines of symmetry</u>." Is she correct?
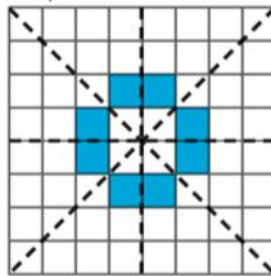**No**

1. Draw your own pattern, with <u>more than two lines of symmetry</u>.
You should have drawn a simple pattern showing horizontal, vertical and diagonal symmetry like the example here.

2. Can you shade the squares to create a pattern on a grid?
   Multiple answers possible.

Greater Depth

a) What is the smallest number of squares you would have to shade to make a symmetrical pattern, if the line of symmetry was vertical as shown here? **3**
b) Draw a horizontal or diagonal line of symmetry on the grid and shade the fewest squares you can to make a symmetrical pattern. **Multiple answers.**
c) Are there places on the grid where the line of symmetry can't go? **The line of symmetry can't go so close to the edge of the grid that there aren't enough squares on the other side of the line to complete the pattern.**