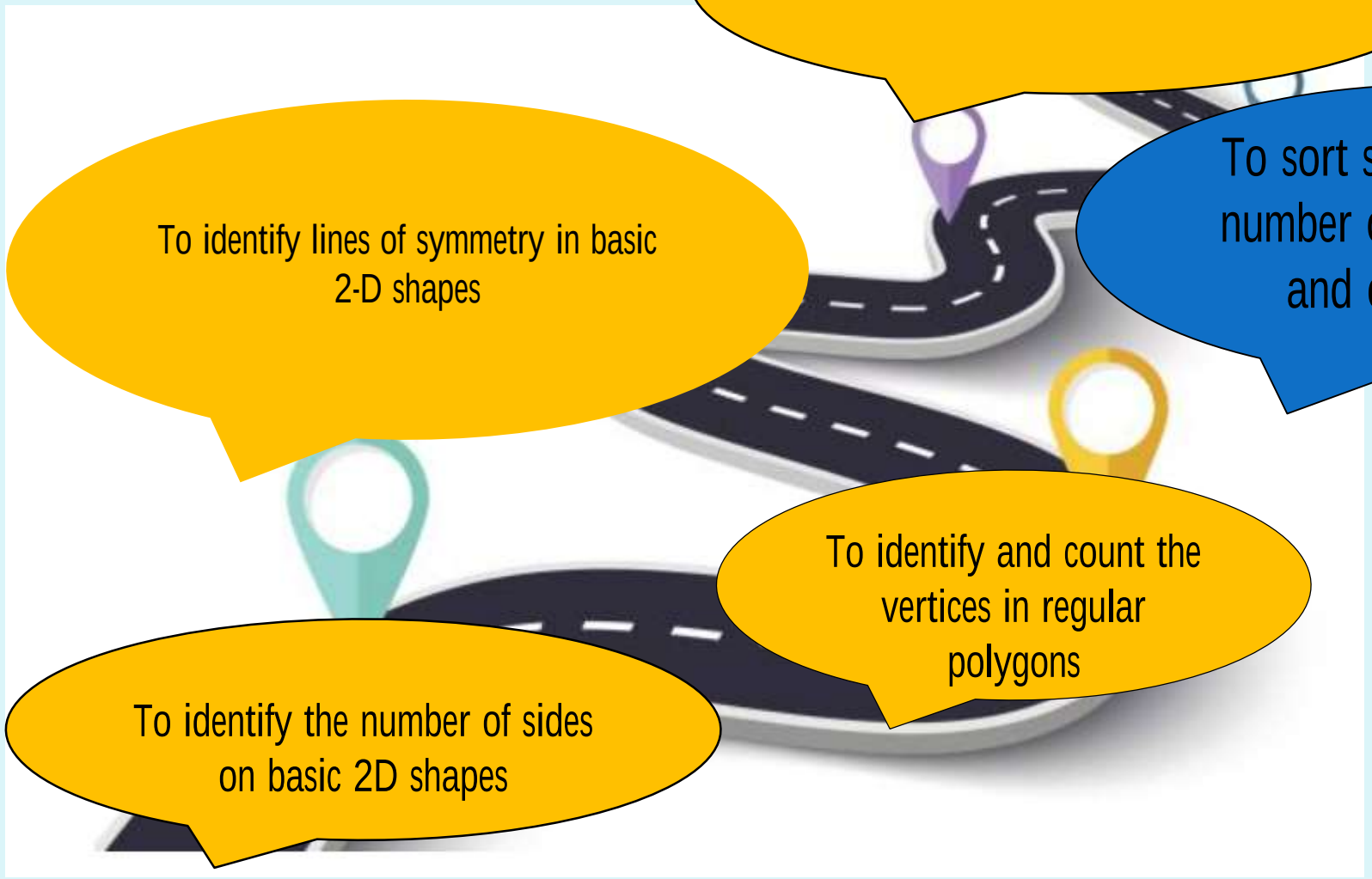
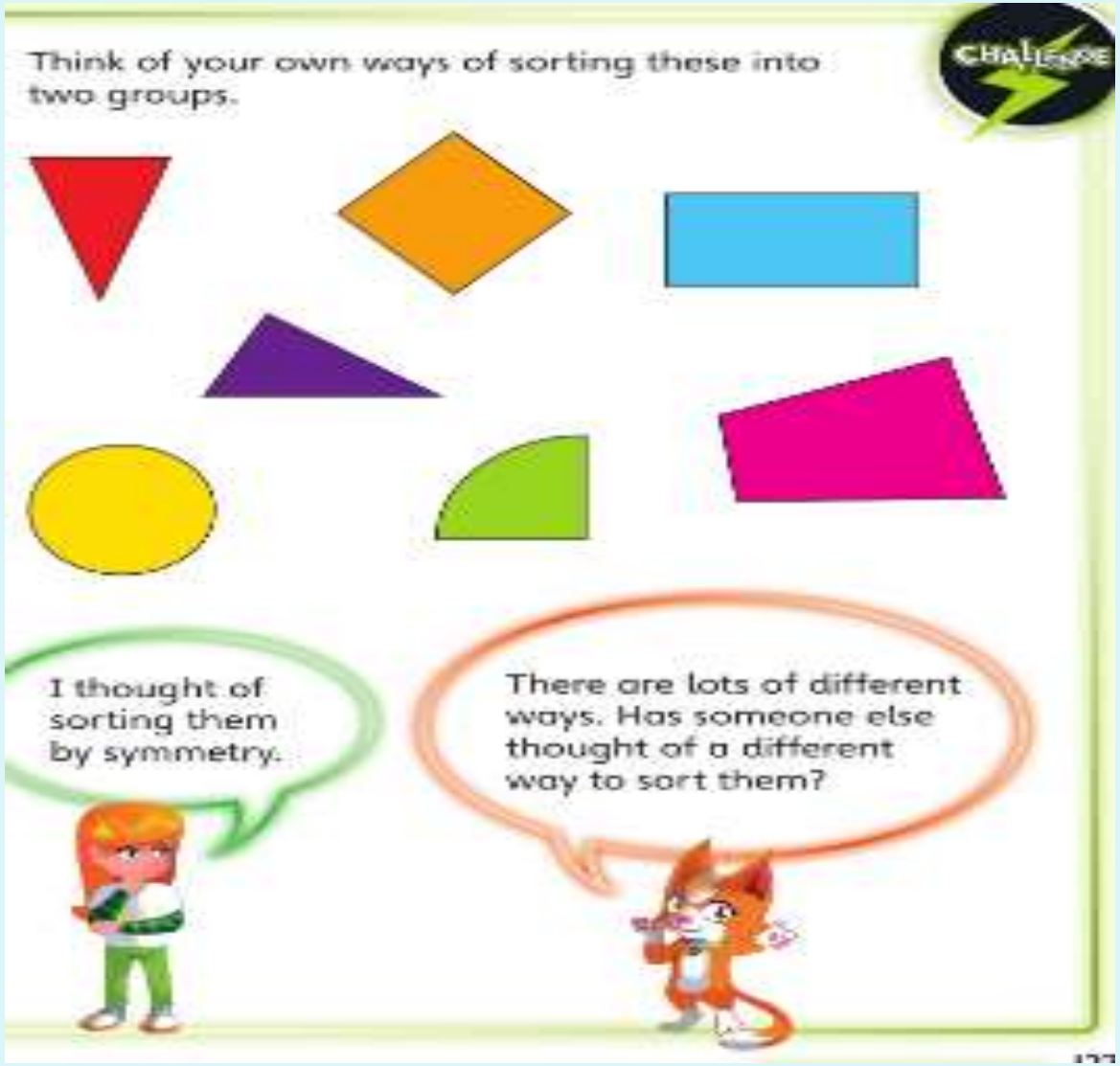
Our Maths Learning Journey

Key vocabulary:
Line of symmetry
Polygons
Vertices
Edges
Regular and irregular polygons



20.02.2024

Challenge of the week



Mental Maths

Add the 2 two-digit numbers using the column method.

36+27 48+15 63+19 18+29 46+28

Self assessment

Do you understand how to add using regrouping?

20.02.2024

LQ: Can I identify the number of sides on 2D shapes?

Steps to Success:

I can name 2D shapes.

I can identify the number of sides on 2D shapes.

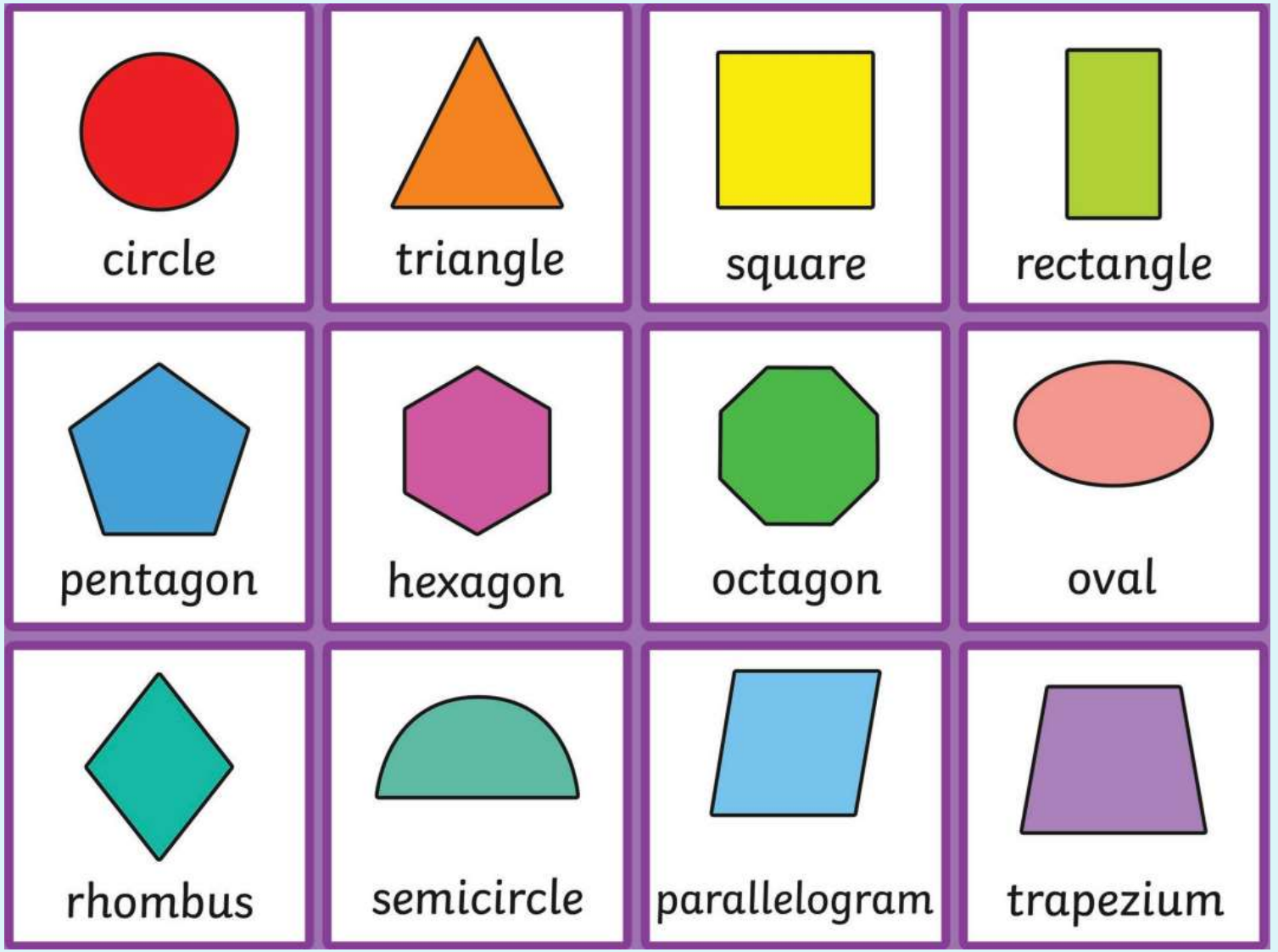
STAR WORDS

polygon

quadrilateral

regular

irregular



20.02.2024

LQ: Can I identify the number of sides on 2D shapes?

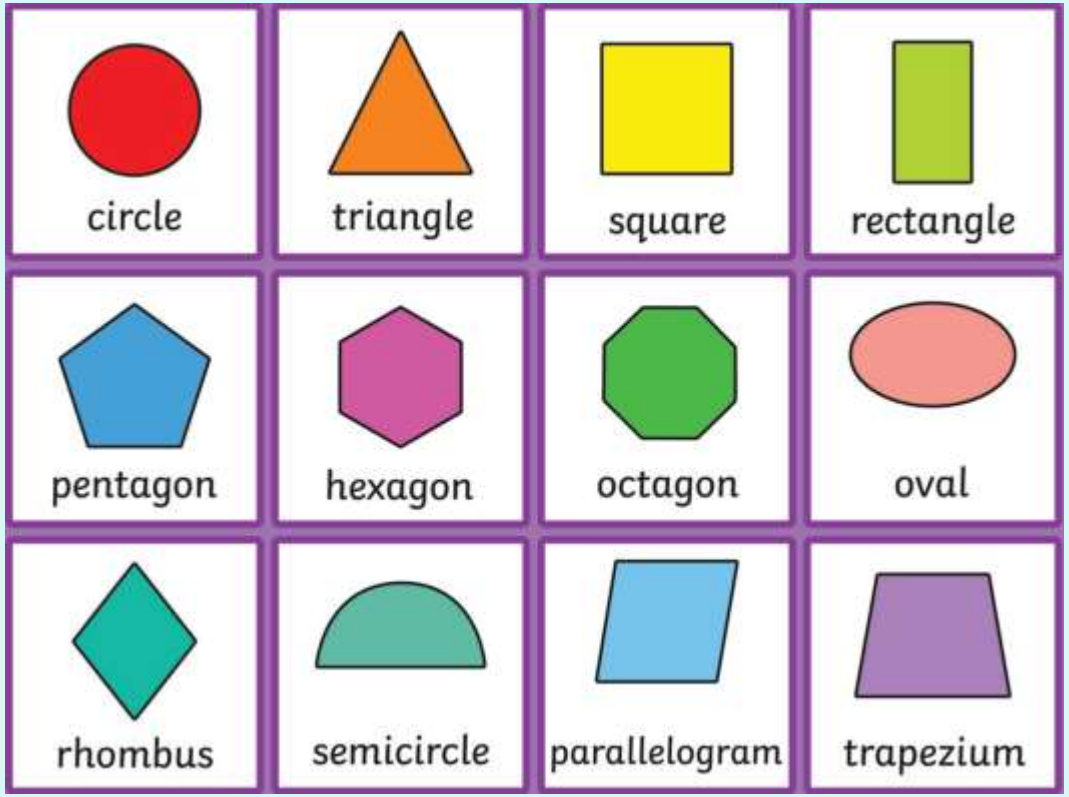
Today you are going to recap about the properties of 2D shapes.

Let's recap: https://www.youtube.com/watch?v=1yID0JzpVo8

What words would you use to describe the 2D shapes?

2D shapes are flat shapes. They have sides and vertices. Some sides are straight and some are curved.

Vertices are the corners.



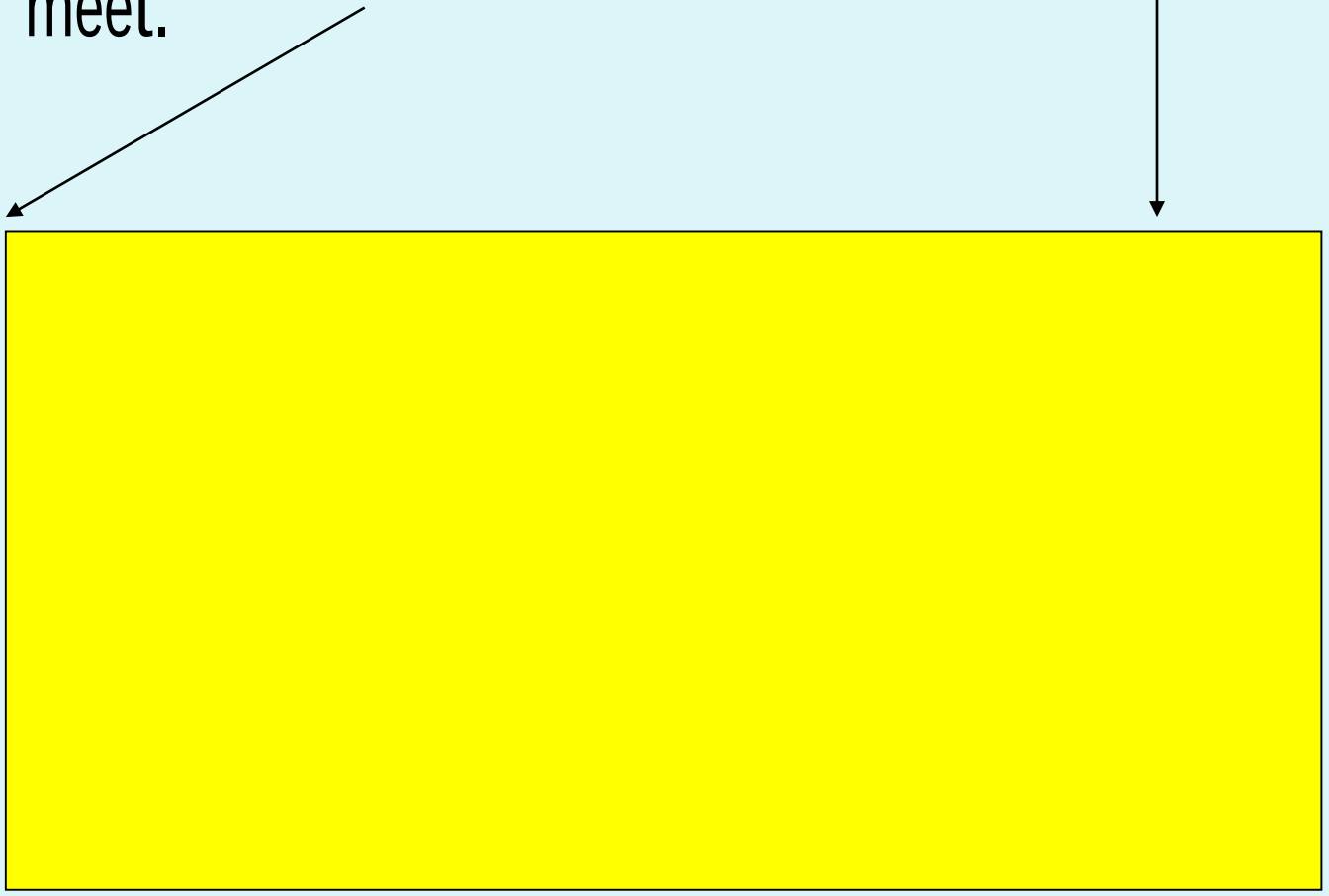
20.02.2024

LQ: Can I identify the number of sides on 2D shapes?

2D or Flat Shapes

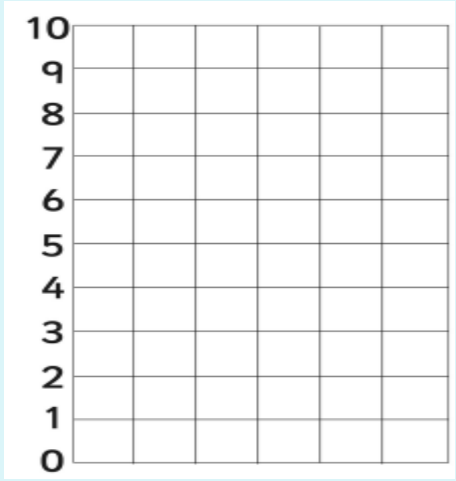
Corner / vertex– where two sides meet.

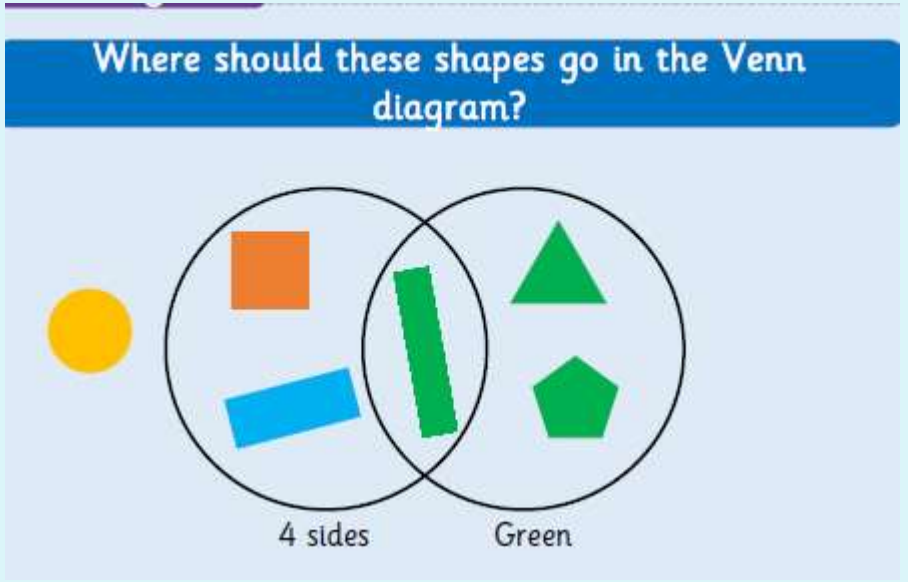
Side – the edge of the shape



20.02.2024

LQ: Can I identify the number of sides on 2D shapes?





TASK

Practical

You are going to explore shapes. Use tally charts and bar graph to record the sides of each shape.

You can use Venn diagram and sort shapes according to the number of sides.

In groups pick the shapes. After that you can count how many people hold triangles, squares and record it using tally marks.

Tally						
Total						

Self assessment

Do you understand what to do?

21.02.2024

Mental Maths

Add the 2 two-digit numbers using the column method.

36+27 48+15 63+19 18+29 46+28

Self assessment

Do you understand how to add using regrouping?

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

Steps to Success:

I can name 2D shapes.

I can identify the number of sides on 2D shapes.

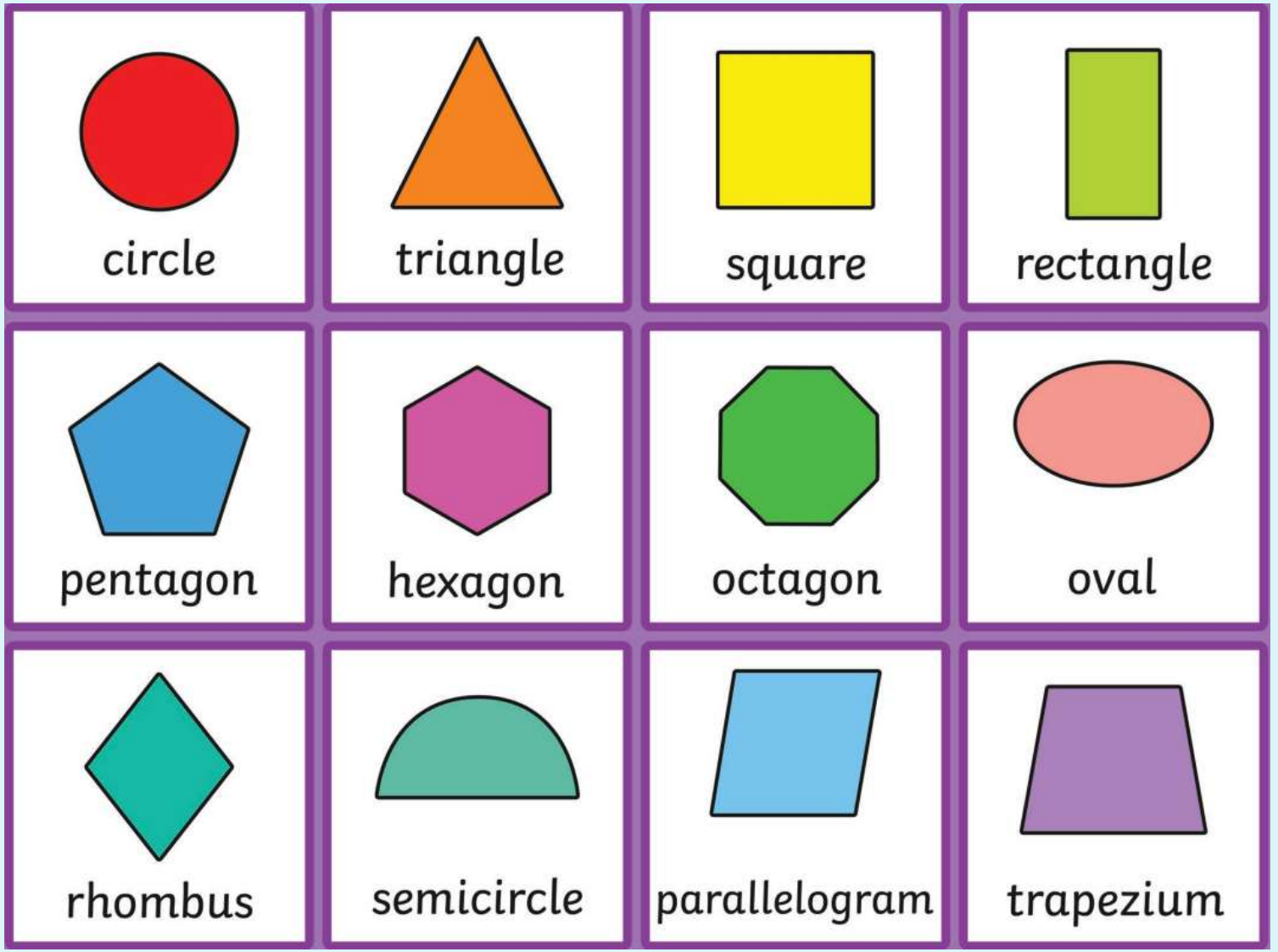
STAR WORDS

polygon

quadrilateral

regular

irregular



21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

Today you are going to recap about the properties of 2D shapes.

Let's recap:

What words would you use to describe the 2D shapes?

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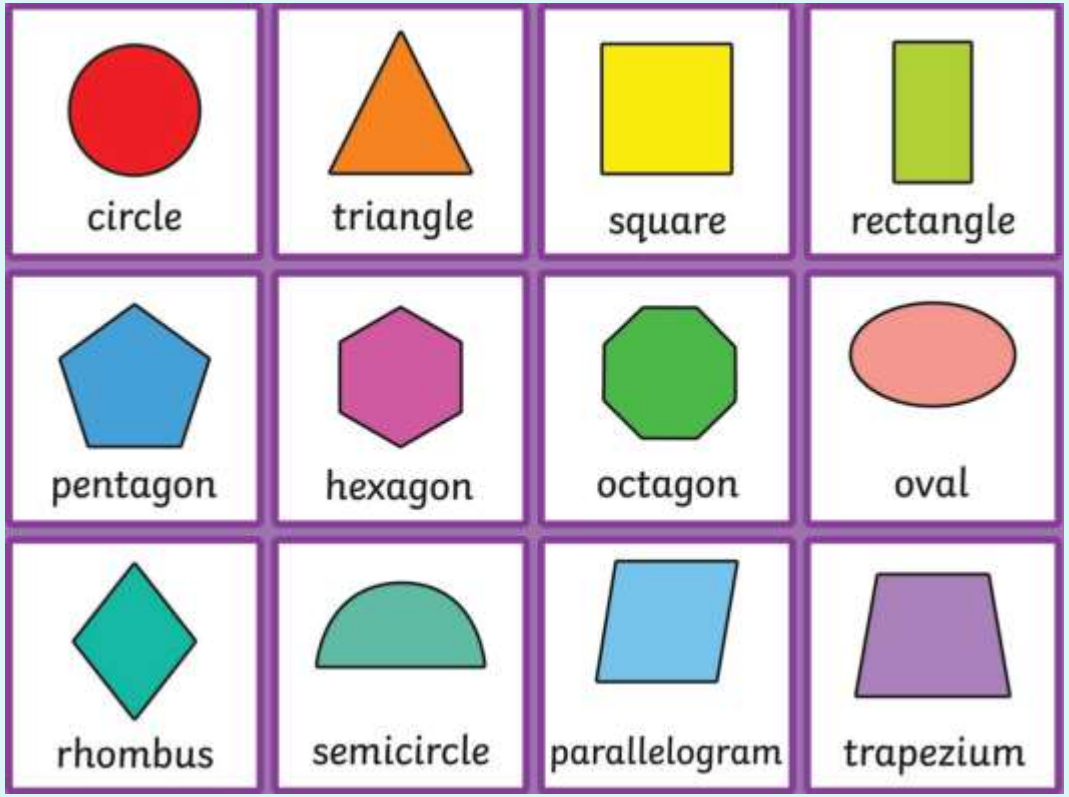
Vertices are the corners.



21.02.2024

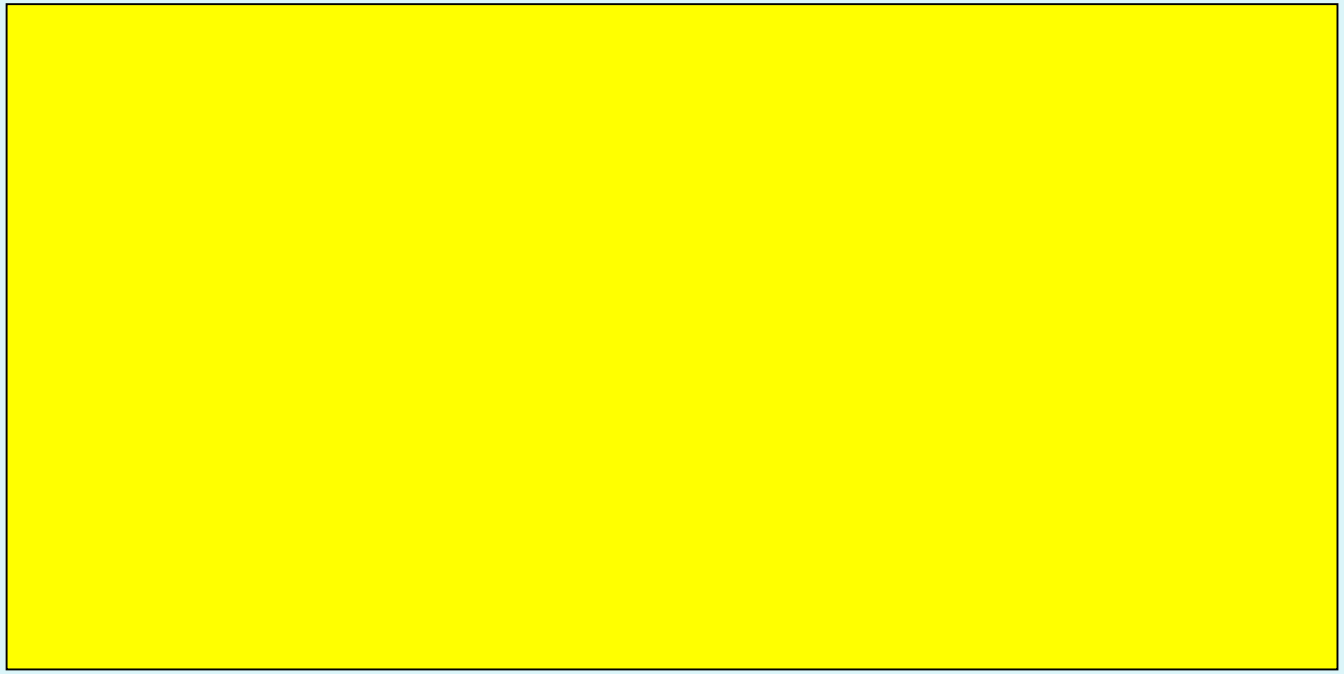
LQ: Can I identify and count the vertices in regular polygons?

2D or Flat Shapes

Recap:

Side – the edge of the shape

Corner or vertex – where two sides meet.

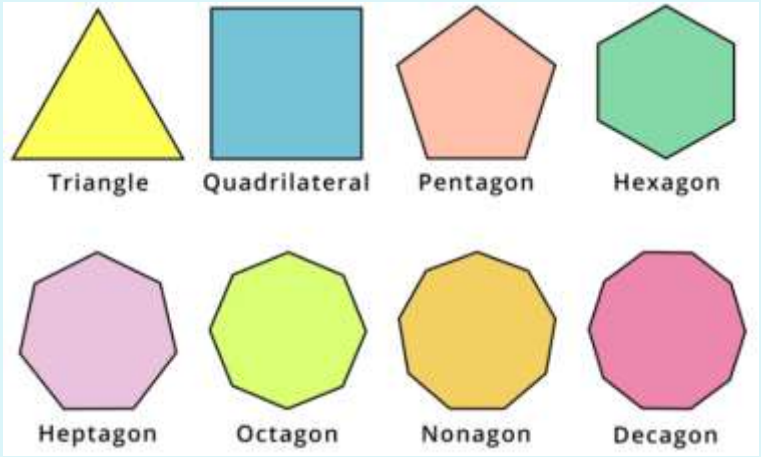


21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

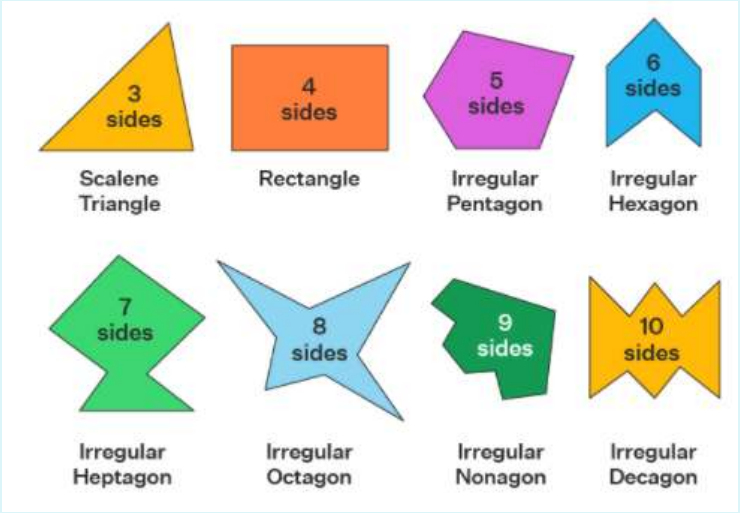
What words would you use to describe the 2D shapes?

Regular polygons



Polygons are closed shapes with straight sides. These are regular polygons. All the sides and all the angles are equal.

Irregular polygons



These are irregular polygons. All the sides and angles are unequal.

21.02.2024

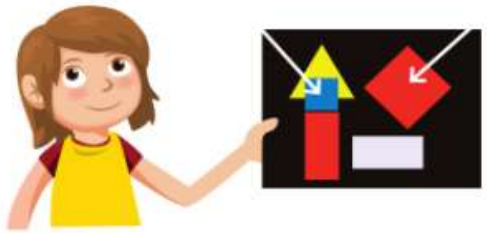
LQ: Can I identify and count the vertices in regular polygons?

Share

a) Mia's picture has two squares.

Which picture has two squares?

I think squares look like this ☐.

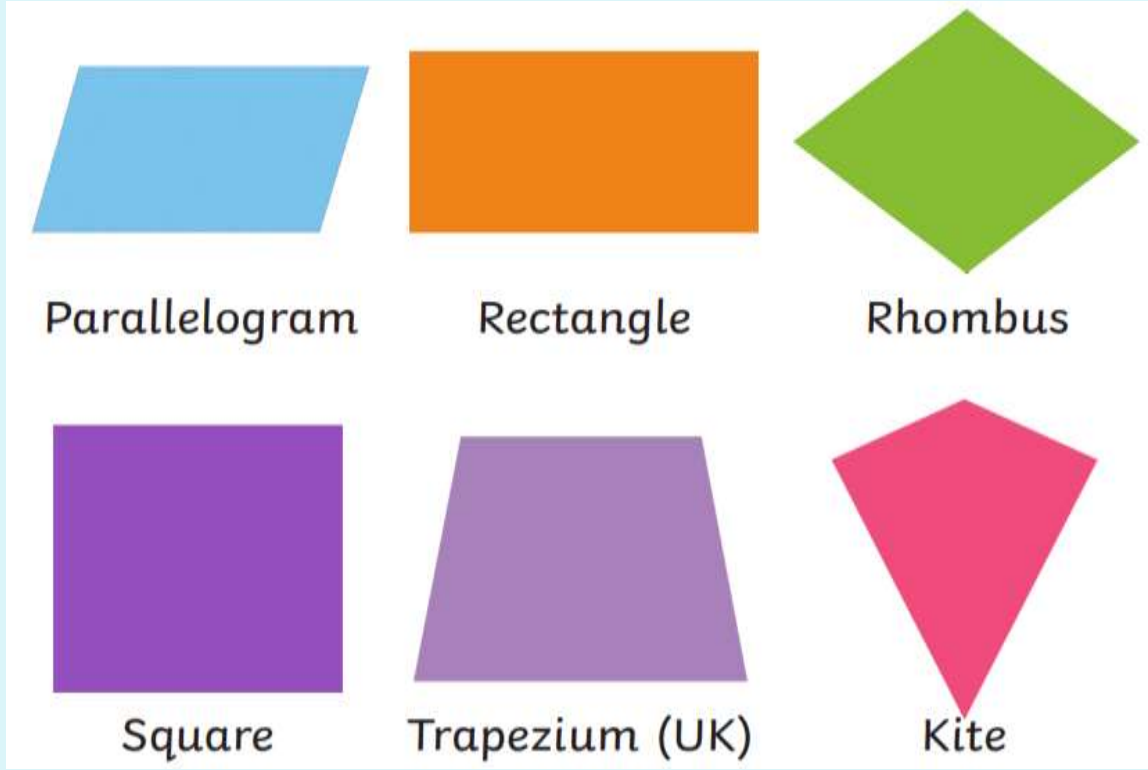


This is Mia's picture.

No. That is a rectangle but not a square. A square is a rectangle where all the sides are the same length. Rectangles and squares are **quadrilaterals** because they have four sides.

b) This is Sunil's picture.

A triangle can be printed in different ways. Remember that a triangle that appears to be upside-down is still a triangle.



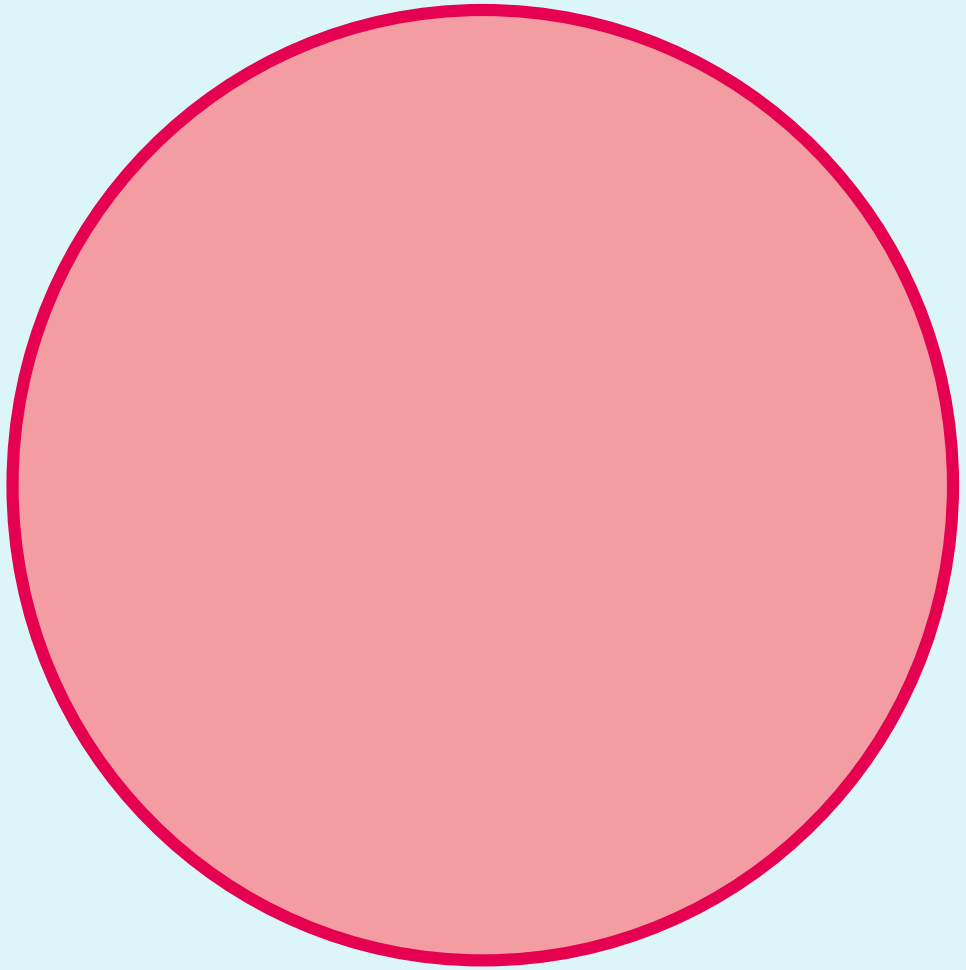
Quadrilaterals = 2D shapes with 4 straight sides.

Quad means 4 and lateral means sides.

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

TP: What is the name of this 2D shape?
How many sides does it have?
How would you describe side?
Does it have corners or vertices? How many?



Circles only have one side.
Circles have no corners.

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

TP: What is the name of this 2D shape?

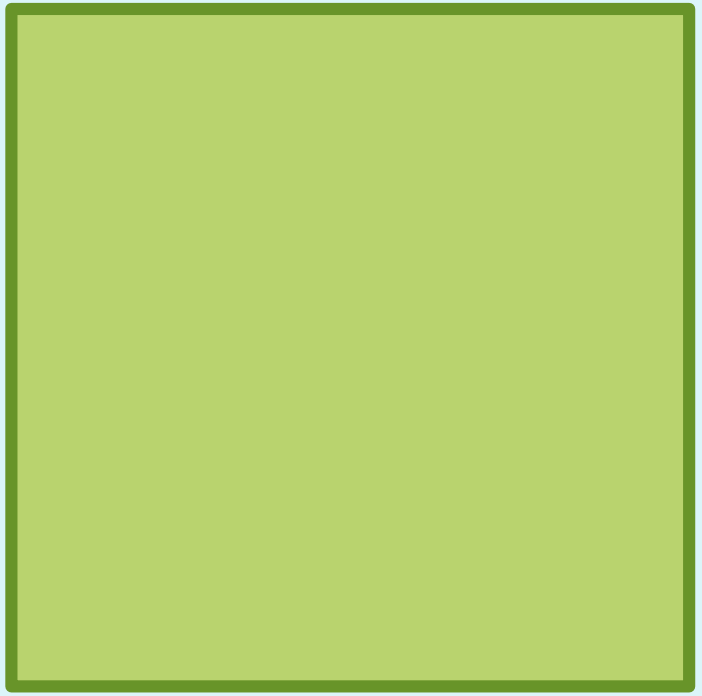
How many sides does it have?

How would you describe sides?

How many corners/vertices does it have?

Is it regular or irregular polygon?

Is it quadrilateral?



Squares have 4 straight sides and 4 corners/ vertices.
All the sides are the same length. Quadrilateral, regular.

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

TP: What is the name of this 2D shape?

How many sides does it have?

How would you describe sides?

How many corners/vertices does it have?

Is it regular or irregular polygon?

Is it quadrilateral?

Rectangles have 4 straight sides and 4 corners. They have 2 long sides and 2 short sides. Quadrilateral, regular.

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

TP: What is the name of this 2D shape?

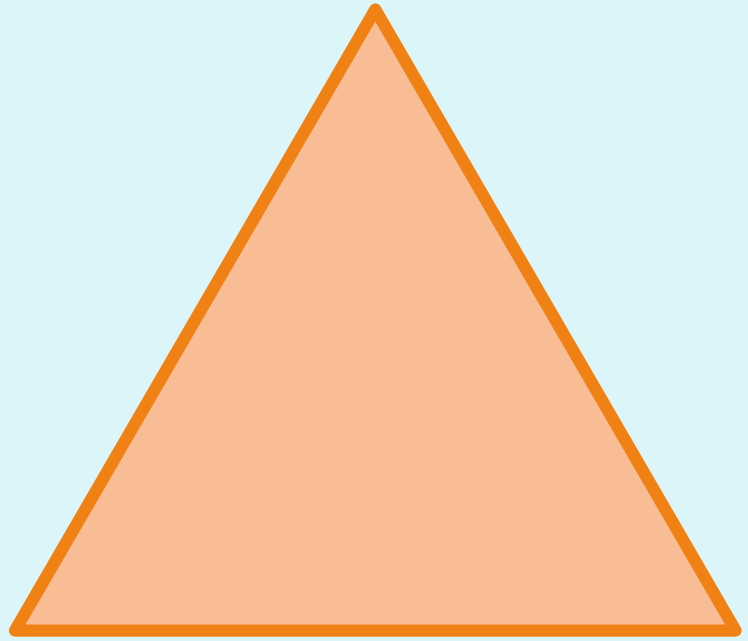
How many sides does it have?

How would you describe sides?

How many corners/vertices does it have?

Is it regular or irregular polygon?

Is it quadrilateral?



Triangles have 3 straight sides and 3 vertices/corners. Regular.

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

Look at the shapes on your table.

TP: What is the name of 2D shape?

- How many sides does it have?
- How would you describe sides?
- How many corners/vertices does it have?
- Is it regular or irregular polygon?
- Is it quadrilateral?

Self assessment
Do you understand what to do?

21.02.2024

LQ: Can I identify and count the vertices in regular polygons?

Complete the tasks in the books.

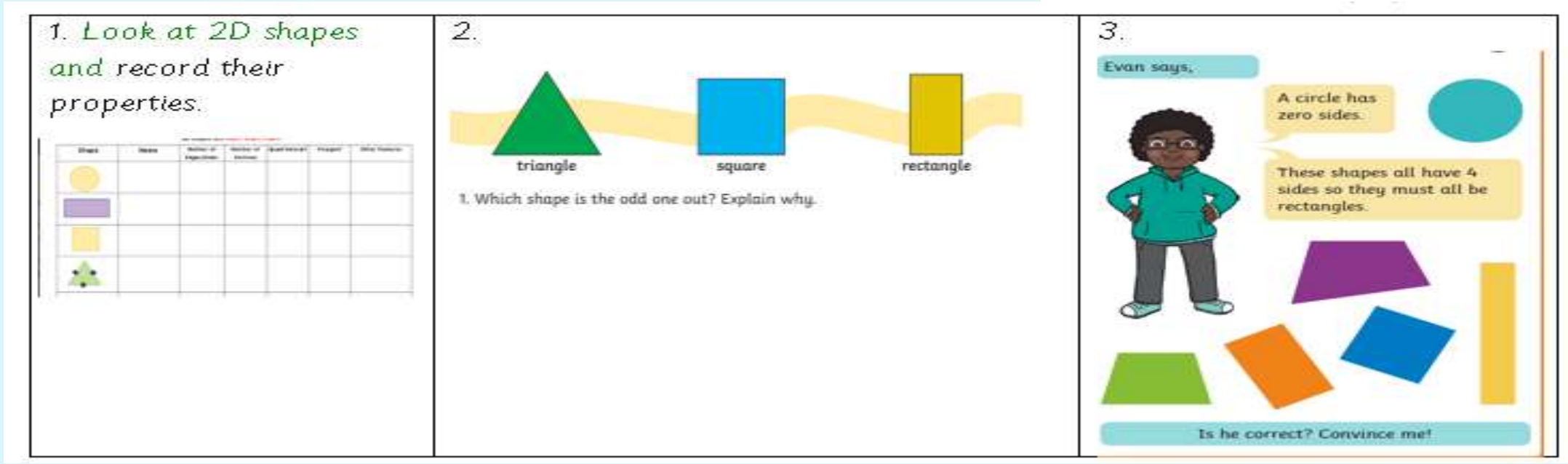
What Am I?

I am a 2D shape.

I have six sides.

I have six vertices.

All my sides are straight.



22.02.2024

Mental Maths

75 - 16 _____	41 - 25 _____
20 - 16 _____	62 - 44 _____

22.02.2024

LQ: Can I investigate vertical line symmetry?

Steps to Success:

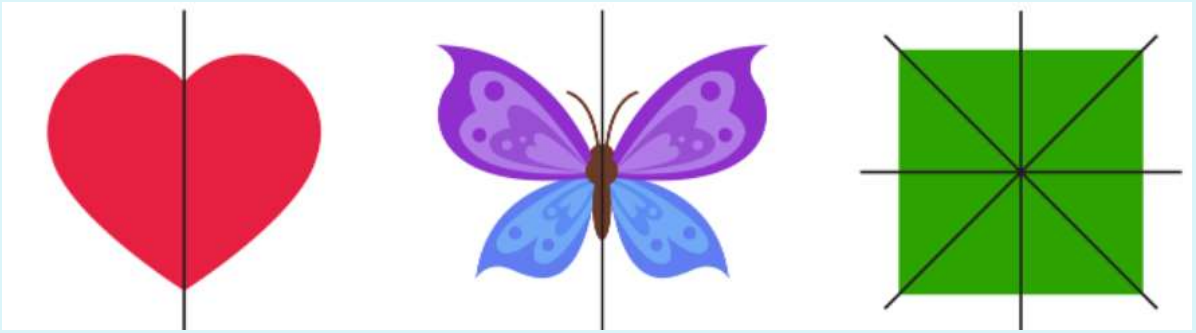
I can say if a line of symmetry has been drawn correctly.

I can complete half of a symmetrical shape.

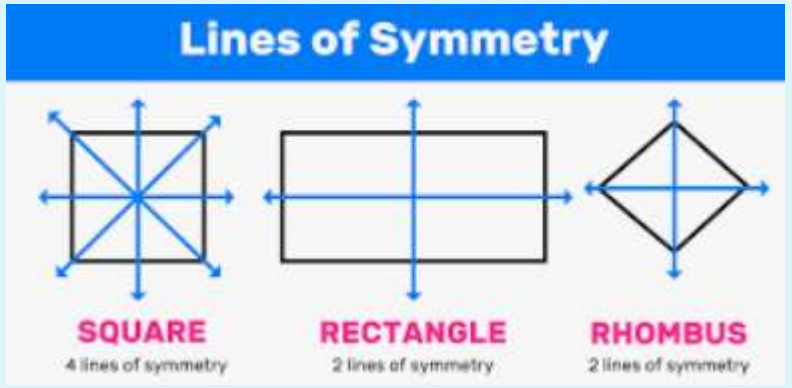
I can investigate statements about symmetry.

STAR WORDS

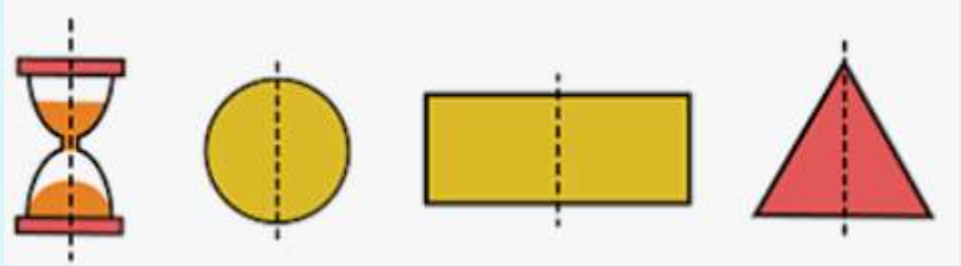
symmetry



line of symmetry



vertical



reflective

22.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

TP- What does symmetry mean?

What does reflective mean?

Symmetry is when an object looks the exact same on one side as the other. To see if an object is symmetrical, you draw a line of symmetry or a line dividing an object to show a perfect match on each side. It's like making a mirror image.

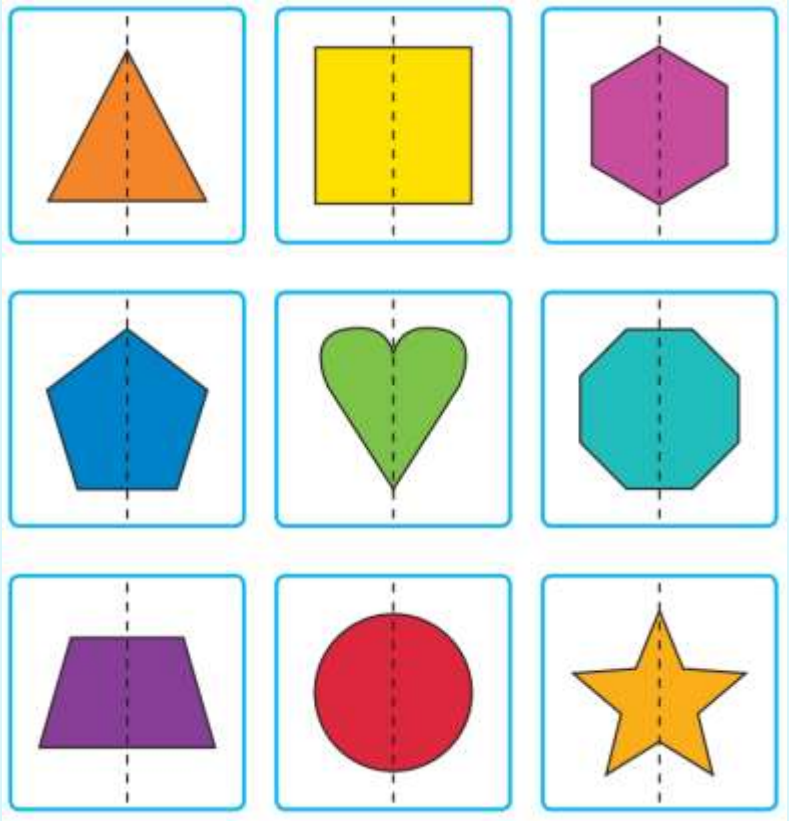
Capable of reflecting light, images, or sound waves

22.02.2024

LQ: Can I investigate vertical line symmetry?

Symmetry

Something is symmetrical **when it has two matching halves**. You can check for symmetry in a shape by drawing a mirror line down the middle and seeing if both halves are identical.



Reflective

Reflective symmetry is **where a shape or pattern is reflected in a mirror line or a line of symmetry**. The shape that has been reflected will be the same as the original, it should also be the same size and it will be the same distance away from the mirror.

22.02.2024

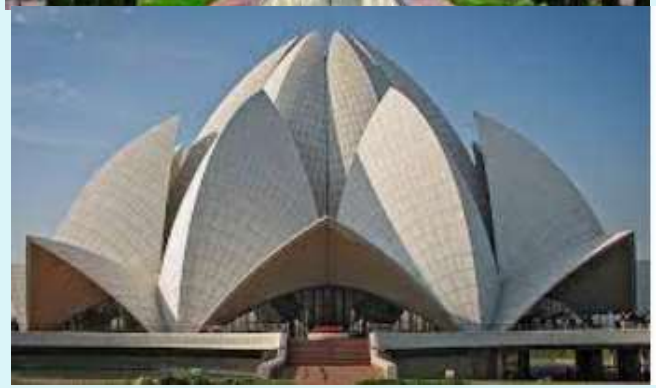
LQ: Can I investigate vertical line symmetry?

Symmetry is all around us

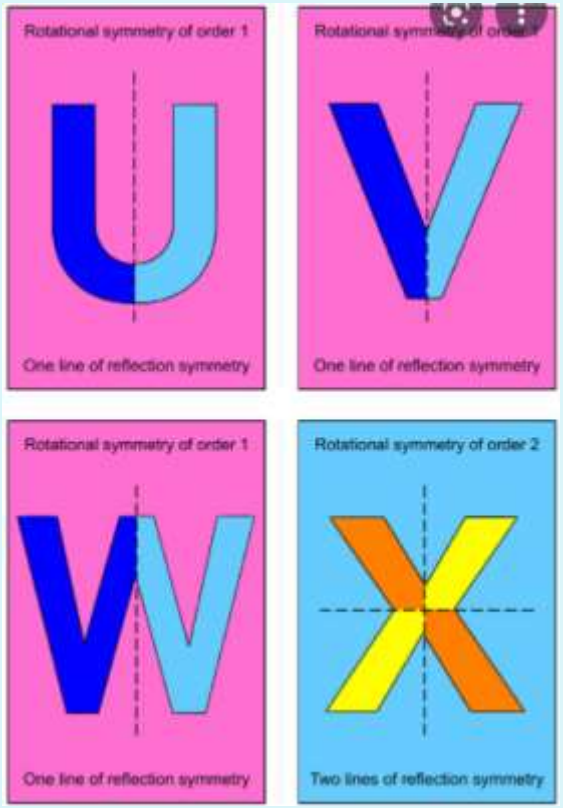
We can see symmetry in nature, architecture, shapes and letters.

nature

architecture



letters



22.02.2024

LQ: Can I investigate vertical line symmetry?

Line of symmetry

Self assessment

Do you understand what a line of symmetry is?

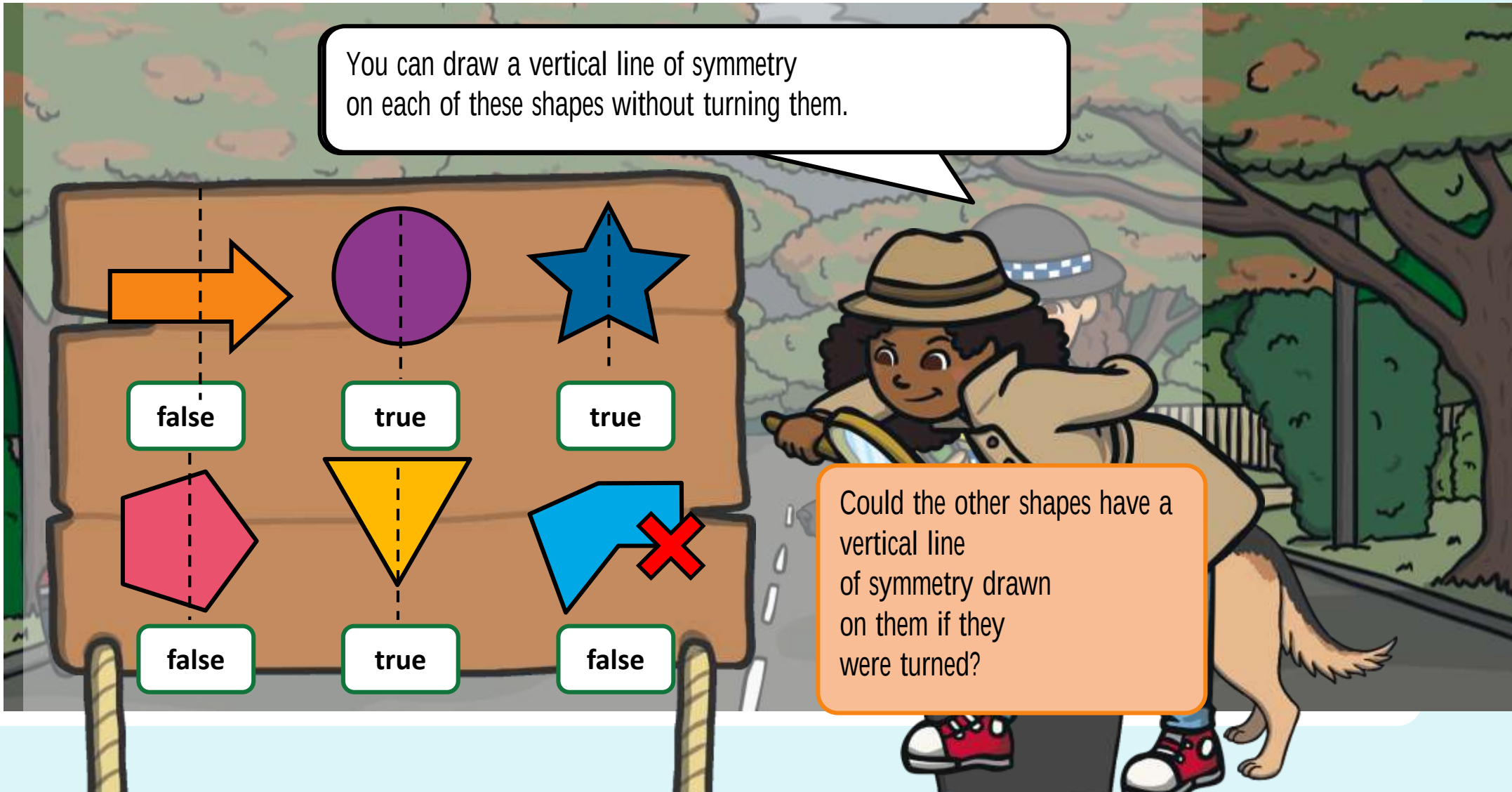
TP - Where will the line of symmetry be on the butterfly? How do you know?

Look around the room. Can you see anything that has a line of symmetry?

22.02.2024

LQ: Can I investigate vertical line symmetry?

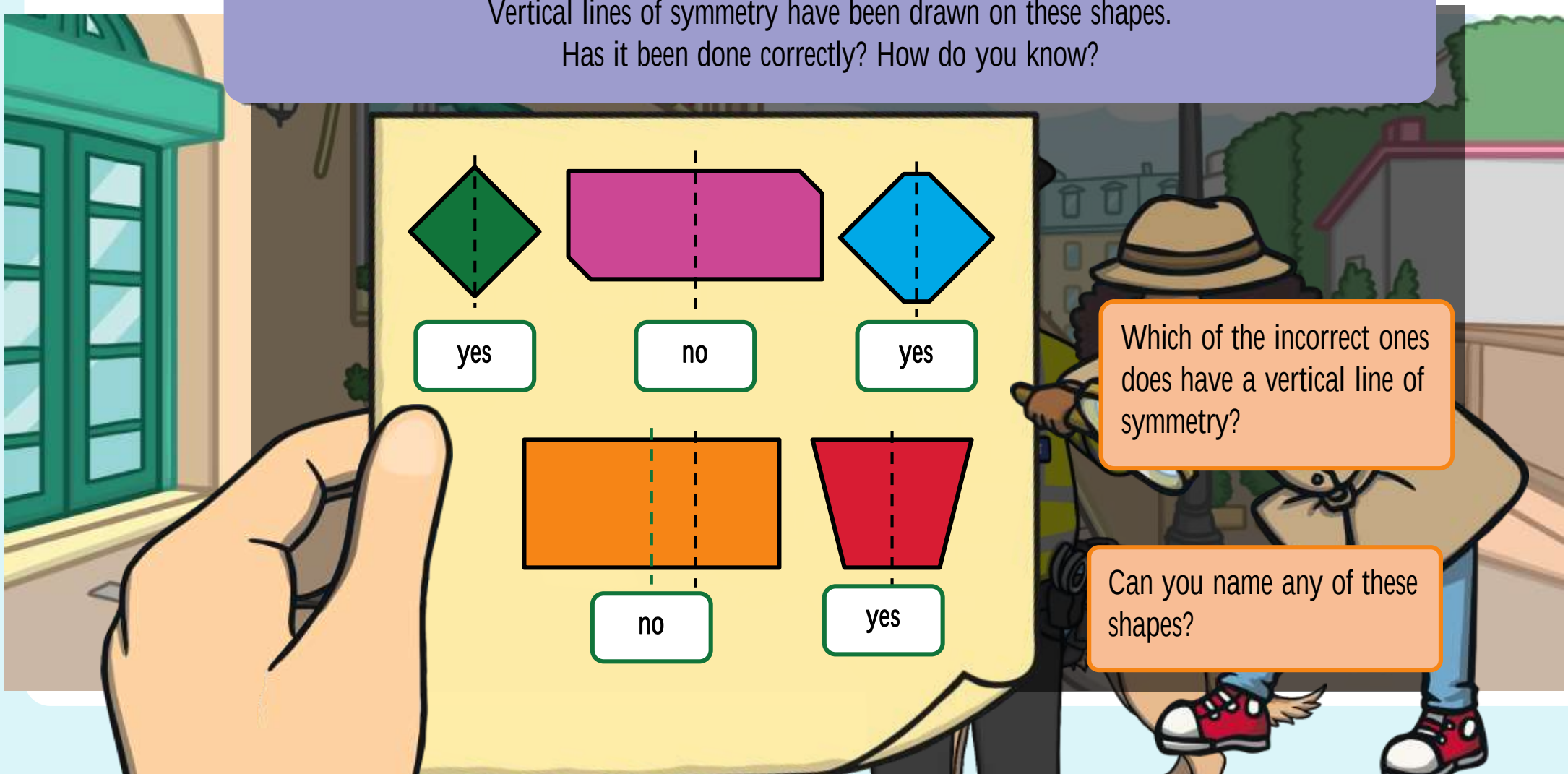
Remember It



22.02.2024

LQ: Can I investigate vertical line symmetry?

Vertical Lines of Symmetry

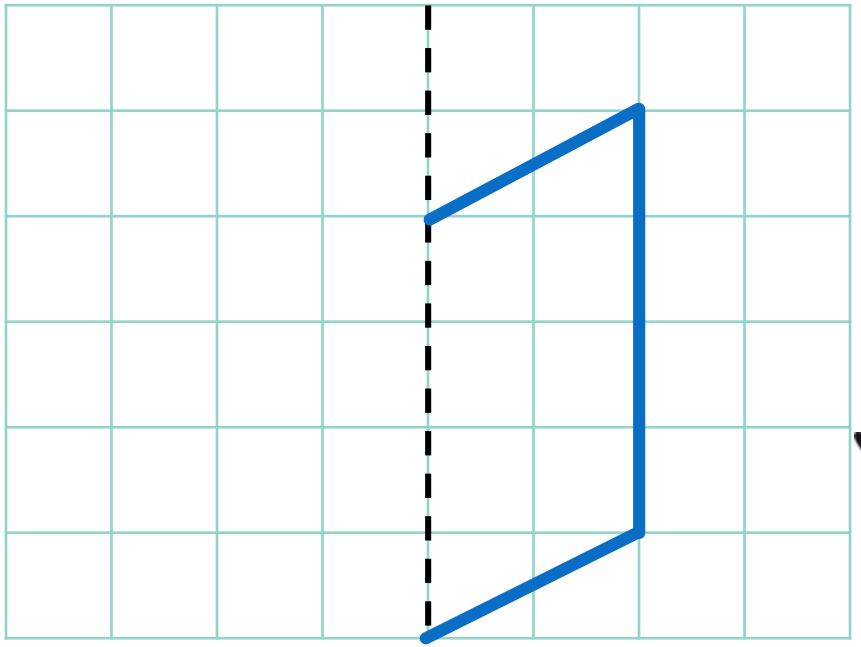


22.02.2024

LQ: Can I investigate vertical line symmetry?

Symmetrical Shapes

Here is half of a symmetrical shape. What would the other half look like?



Remember the **line of symmetry** is sometimes called the **mirror line**.

22.02.2024

LQ: Can I investigate vertical line symmetry?

Symmetrical Shapes

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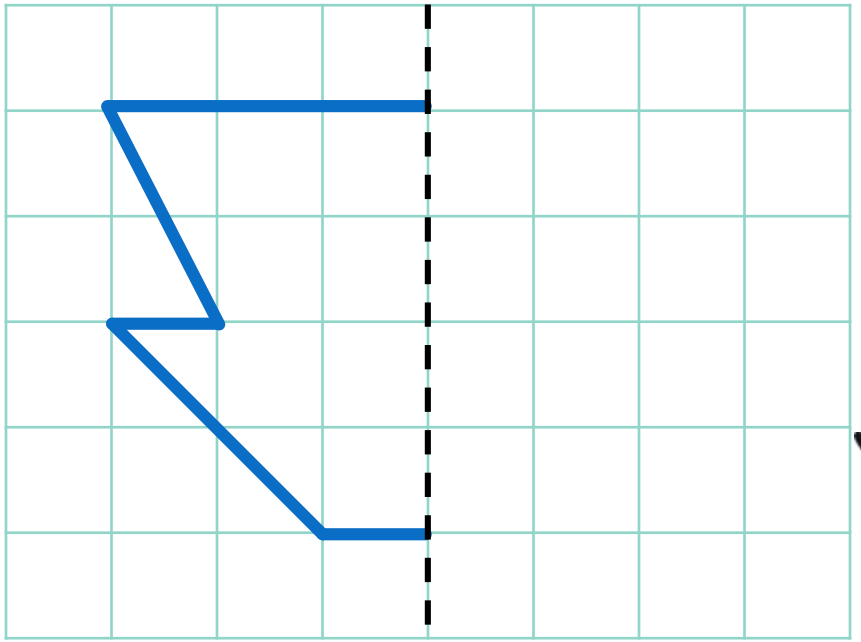
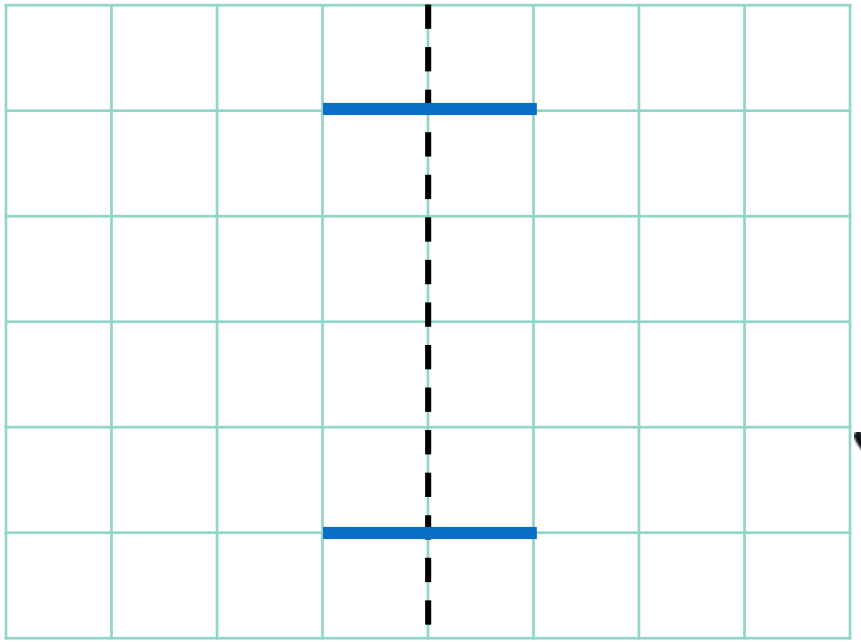


22.02.2024

LQ: Can I investigate vertical line symmetry?

Symmetrical Shapes

Here is part of a symmetrical shape.



22.02.2024

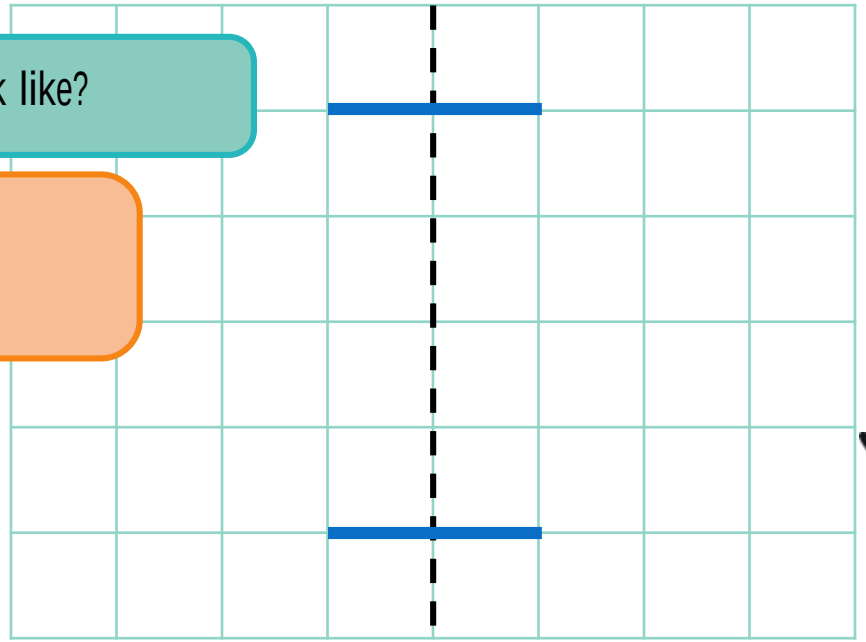
LQ: Can I investigate vertical line symmetry?

Symmetrical Shapes

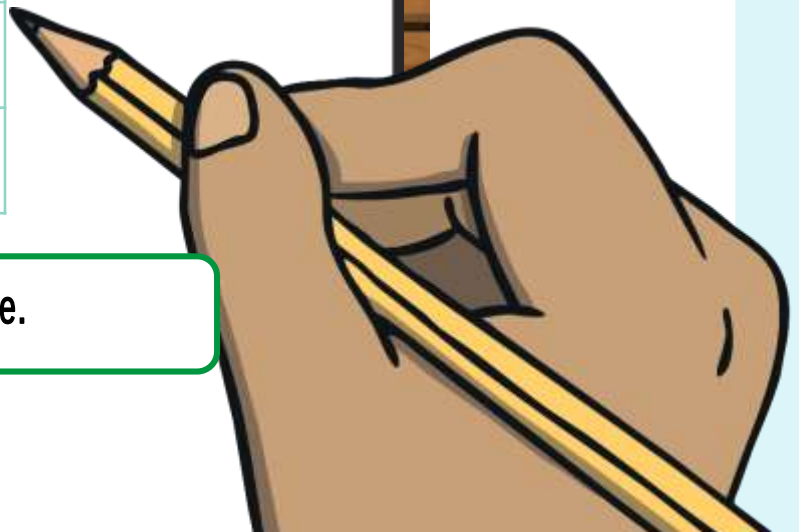
Here is part of a symmetrical shape.

What could it look like?

Create 3 different possible shapes.



There are lots of possible shapes that could be made.



22.02.2024

LQ: Can I investigate vertical line symmetry?

Alphabet Symmetry

10 letters of the alphabet have vertical lines of symmetry.

True or false? How do you know?

A B C D E F G

H I J K L M N

O P Q R S T U

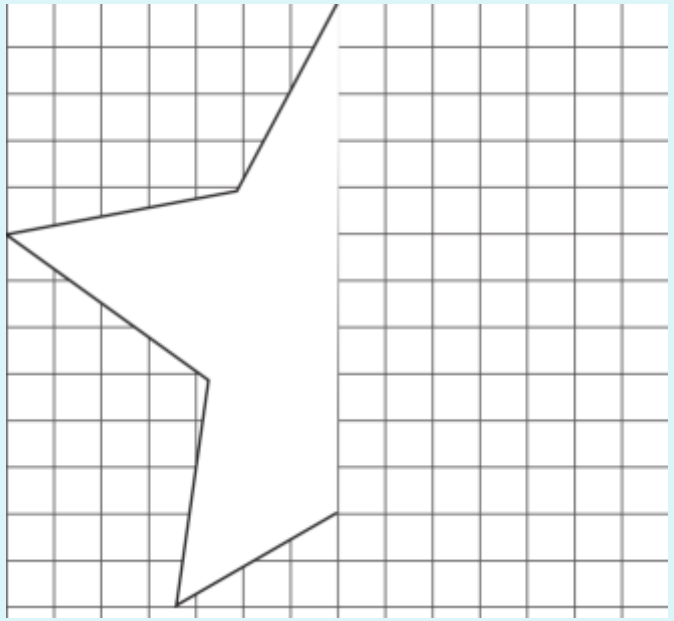
V W X Y Z

False, 11 letters have a vertical line of symmetry.

22.02.2024

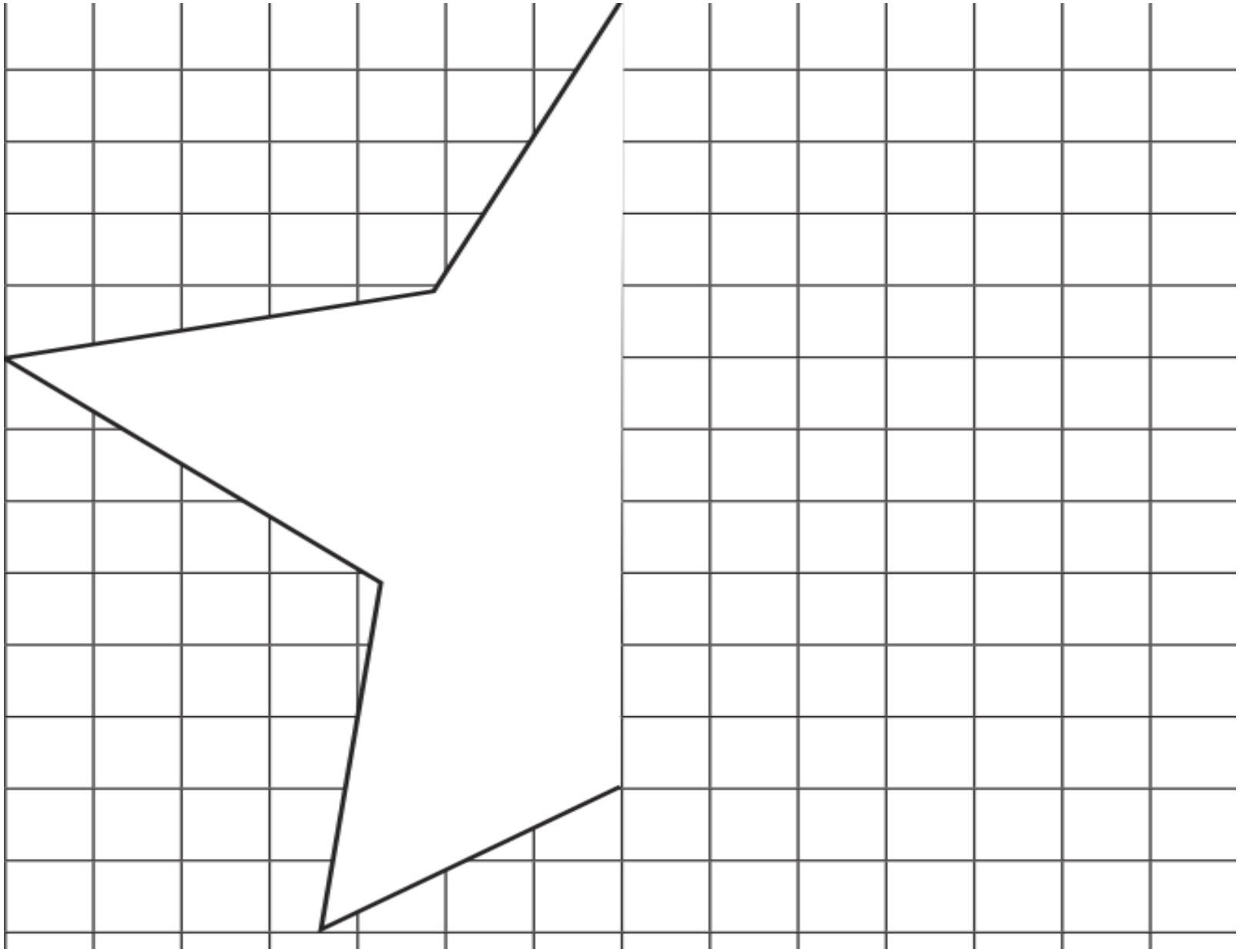
LQ: Can I investigate vertical line symmetry?

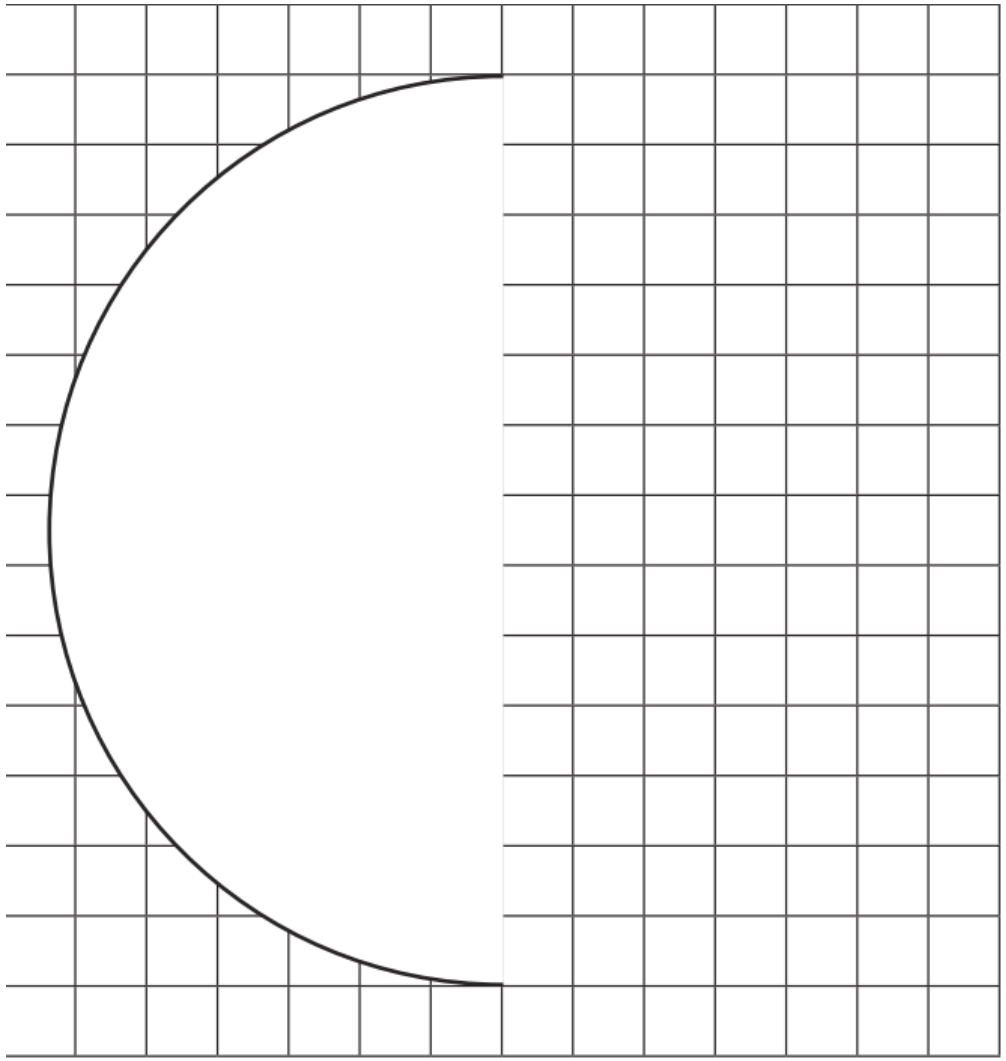
Complete the tasks in the given paper. Use a mirror to help you.
Count squares as well.

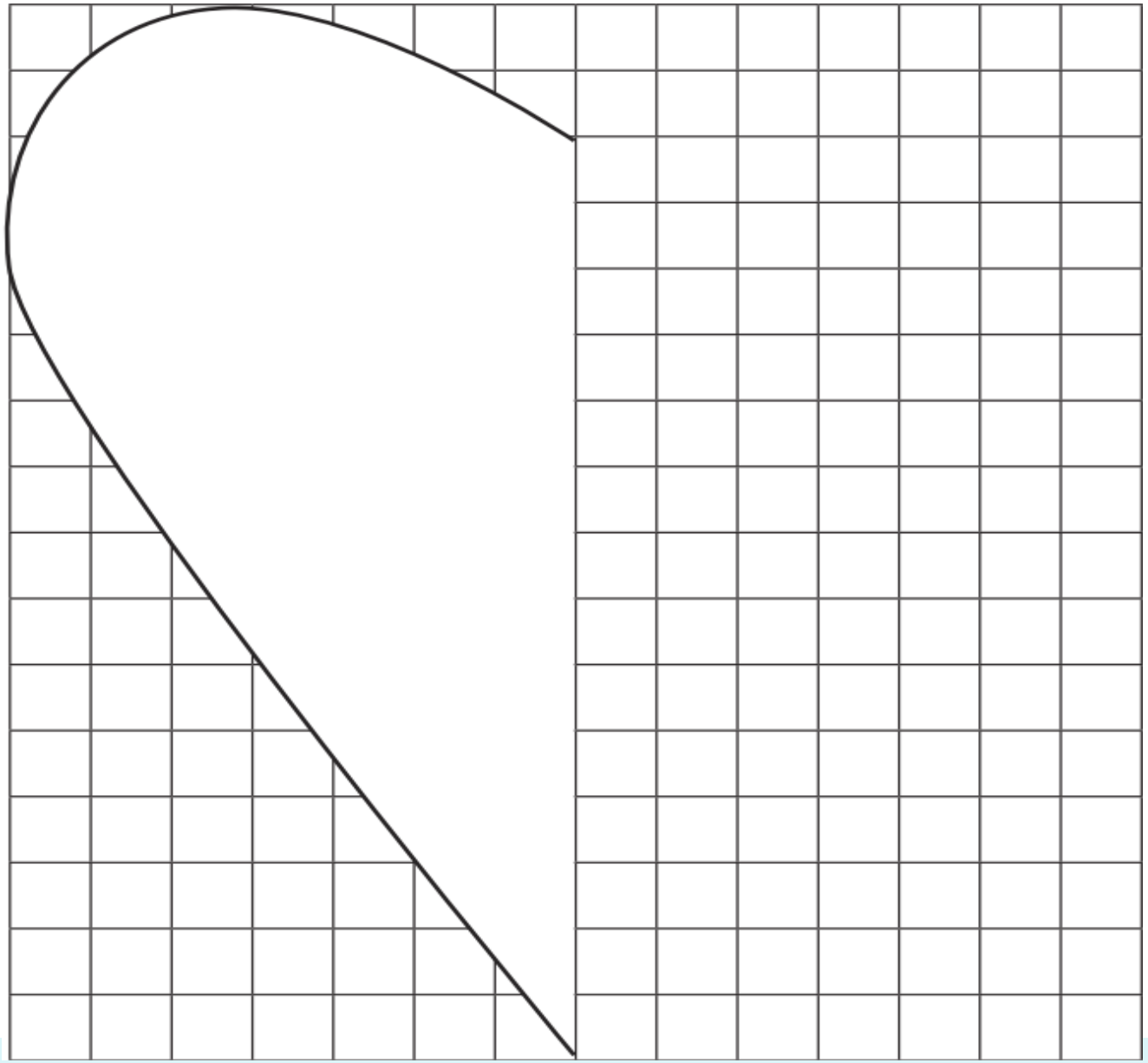


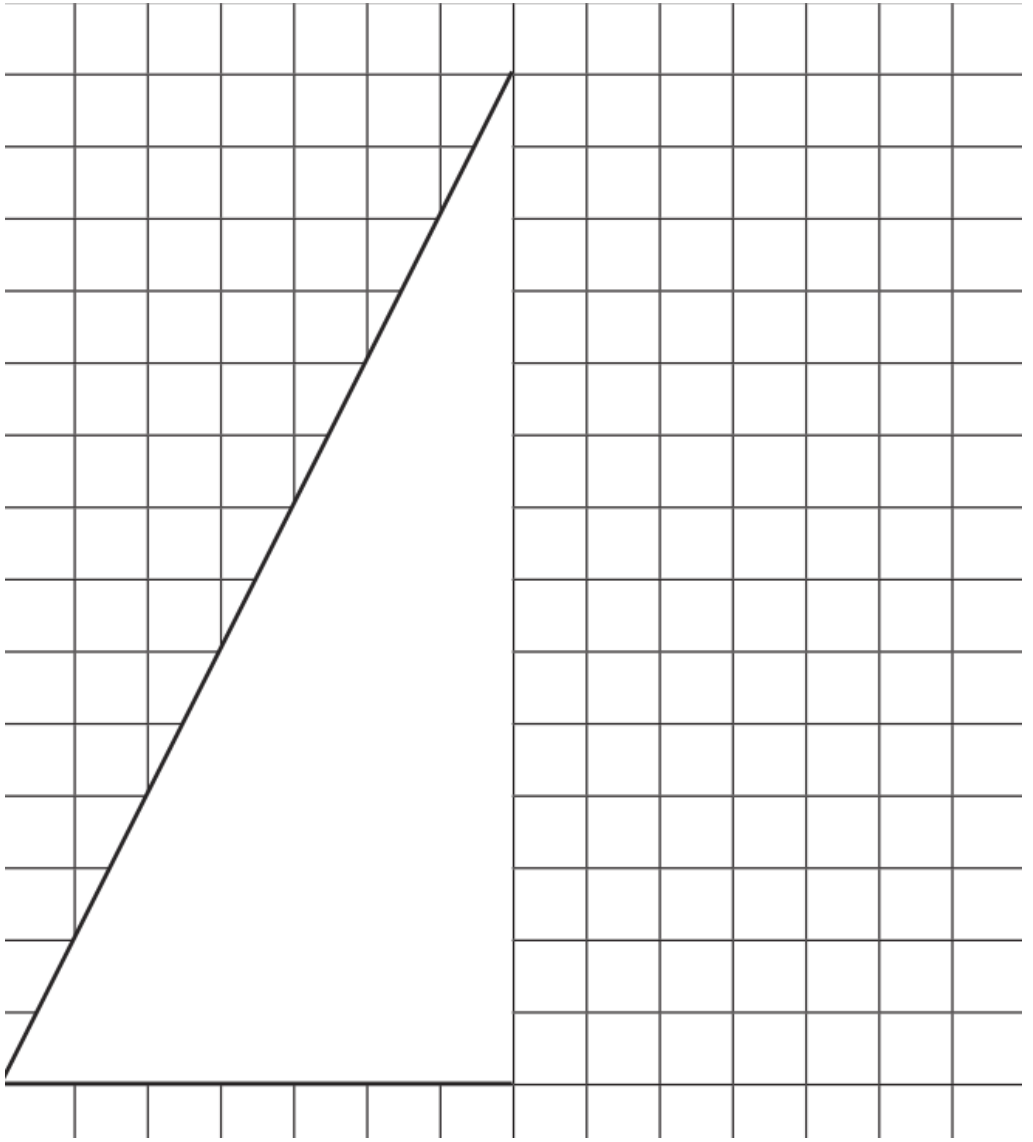
Self assessment

Do you understand what to do?

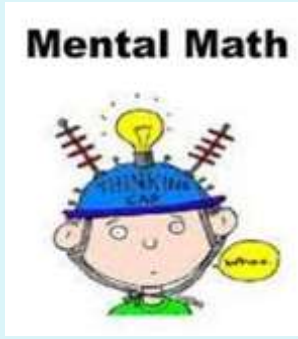








Mental Maths

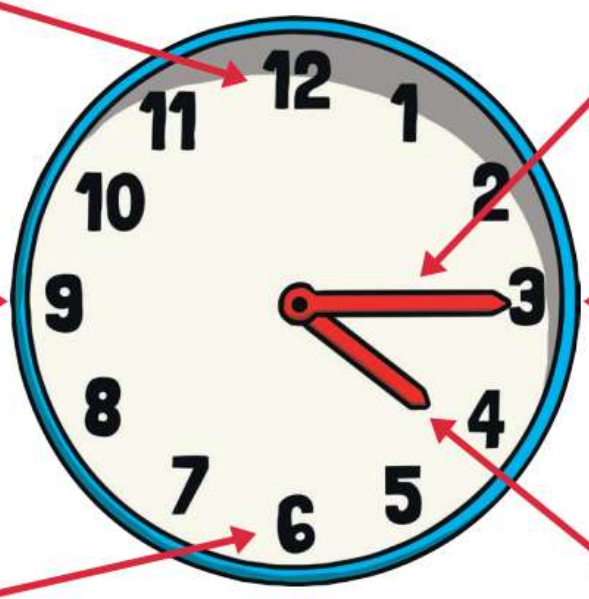


Telling the Time

O'Clock
A new hour begins when the minute hand points to 12.

Quarter To
45 minutes into the hour and 15 minutes before a new hour begins.

Half Past
30 minutes into the hour. 30 is half of 60.



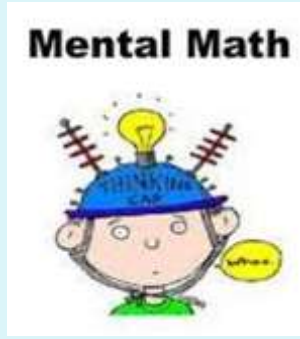
Minute Hand
The long hand points to the minutes past or to the hour.

Quarter Past
15 minutes into the hour. 15 is one quarter of 60.

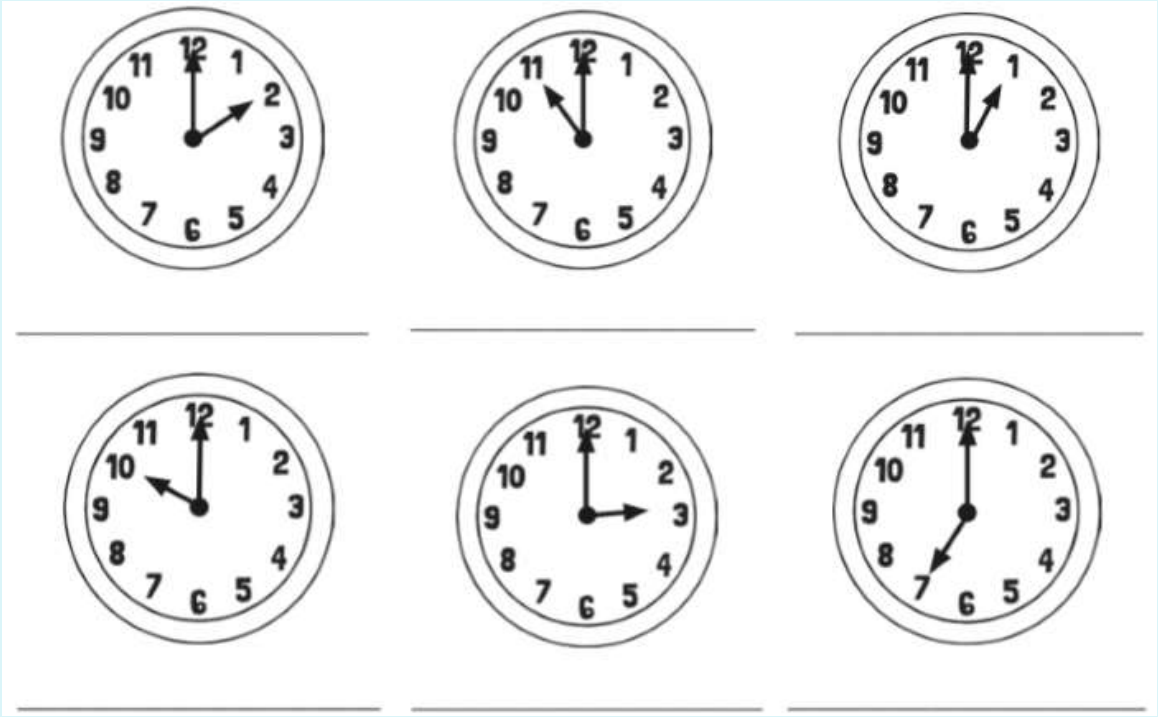
Hour Hand
The short hand points to the hour. If this hand is pointing in between hours, it is the earlier hour of the two.

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours

Mental Maths



Read and write the times on the clocks.



If you need help, use the mini clock.

23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

Steps to Success:

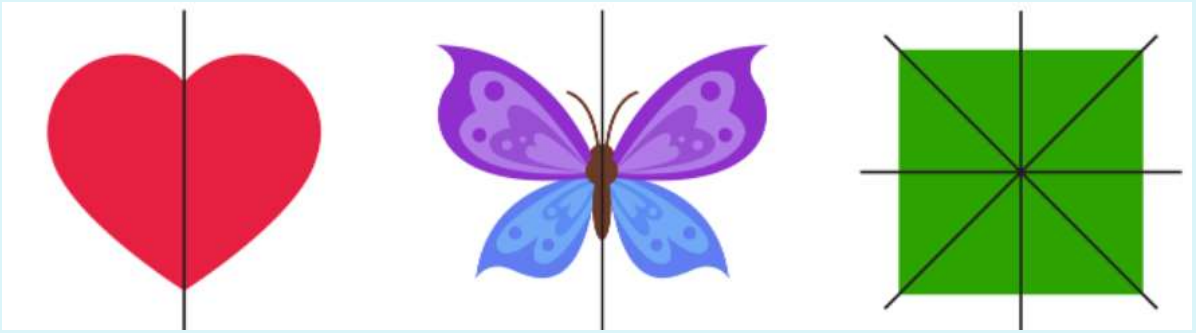
I know what symmetry means.

I can find the lines of symmetry on 2D shapes.

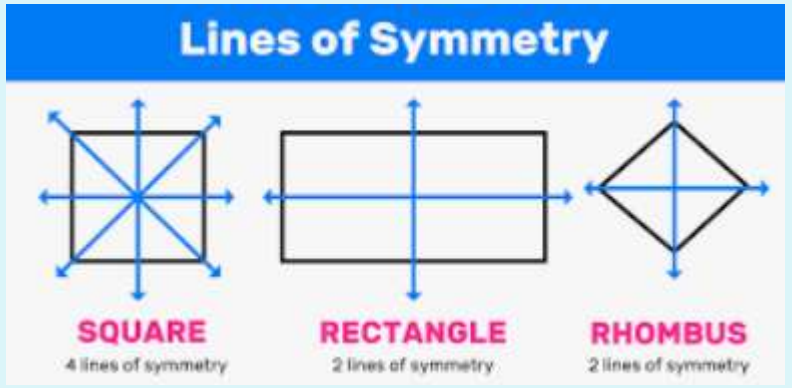
I can describe how many line of symmetry a shape might have.

STAR WORDS

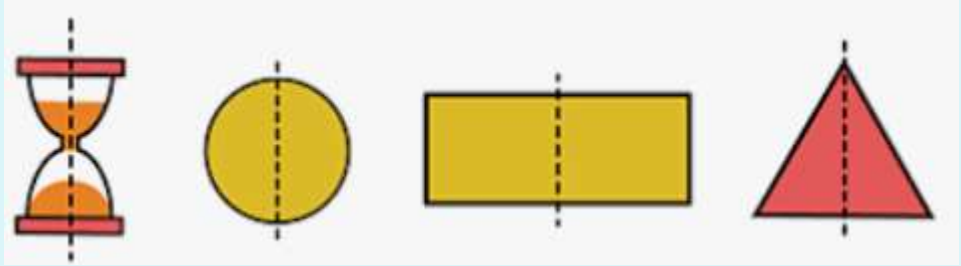
symmetry



line of symmetry



vertical



reflective

23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

TP- What does symmetry mean?

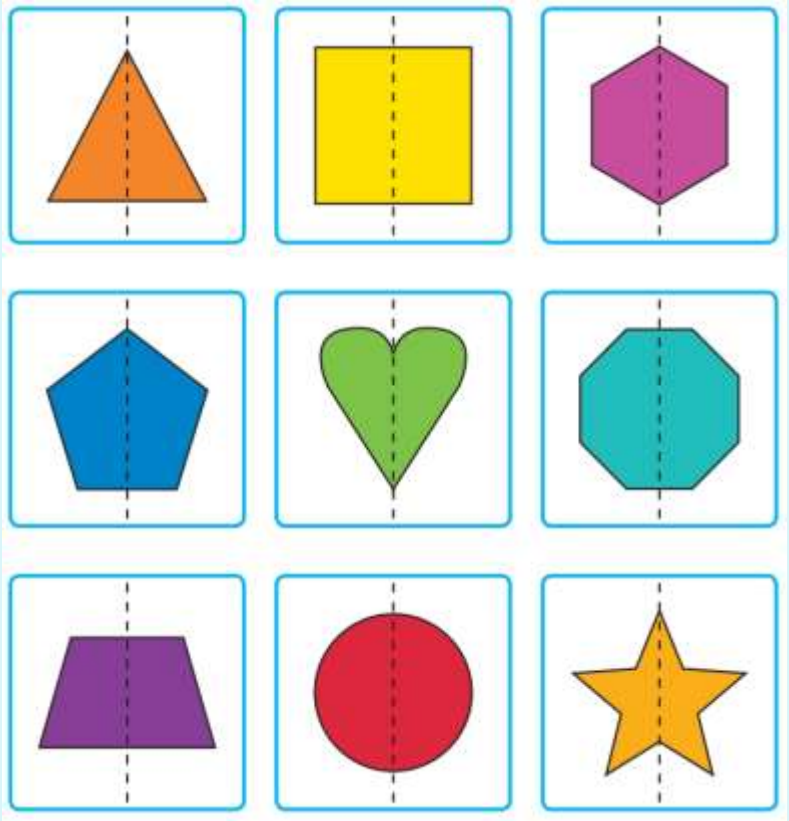
What does reflective mean?

23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

Symmetry

Something is symmetrical **when it has two matching halves**. You can check for symmetry in a shape by drawing a mirror line down the middle and seeing if both halves are identical.



Reflective

Reflective symmetry is **where a shape or pattern is reflected in a mirror line or a line of symmetry**. The shape that has been reflected will be the same as the original, it should also be the same size and it will be the same distance away from the mirror.

23.02.2024

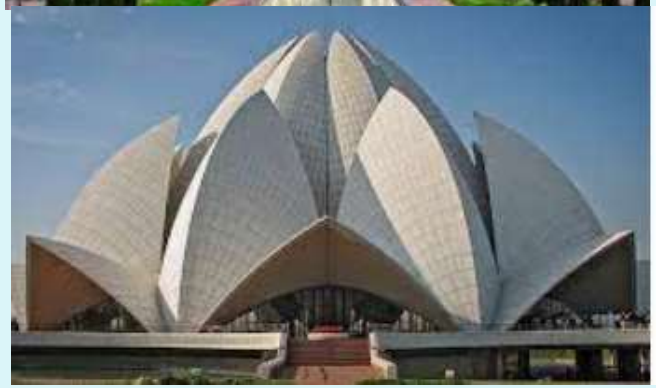
LQ: Can I find lines of symmetry in 2D shapes?

Symmetry is all around us

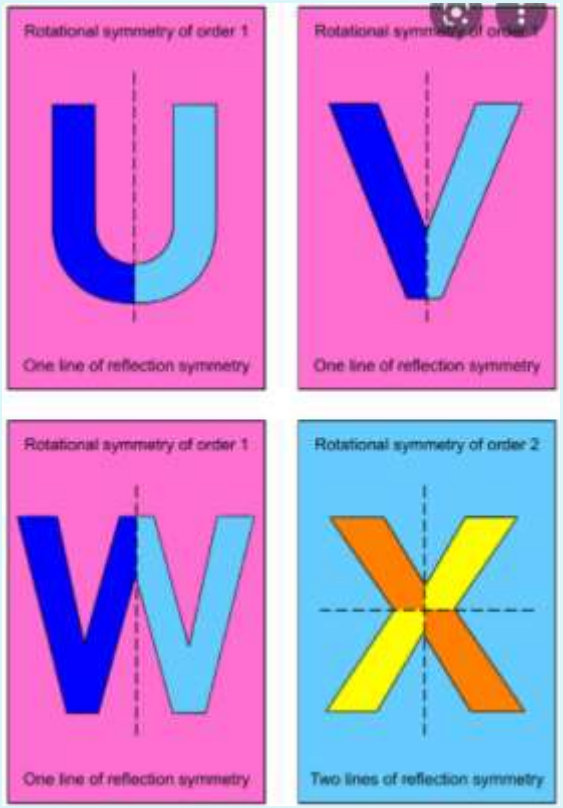
We can see symmetry in nature, architecture, shapes and letters.

nature

architecture



letters



23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

Line of symmetry

Self assessment

Do you understand what a line of symmetry is?

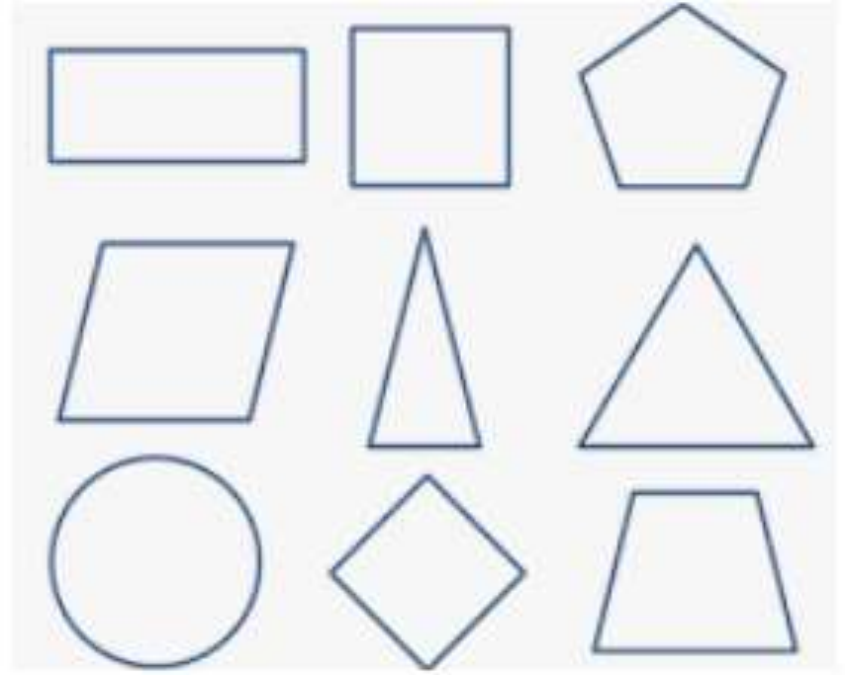
TP - Where will the line of symmetry be on the butterfly? How do you know?

Look around the room. Can you see anything that has a line of symmetry?

23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

Where will the line of symmetry be on these 2D shapes?



With your partner use a mirror to see if you can find a line of symmetry.

What lines can be used to find lines of symmetry? Vertical? Horizontal? Diagonal? How do you know?

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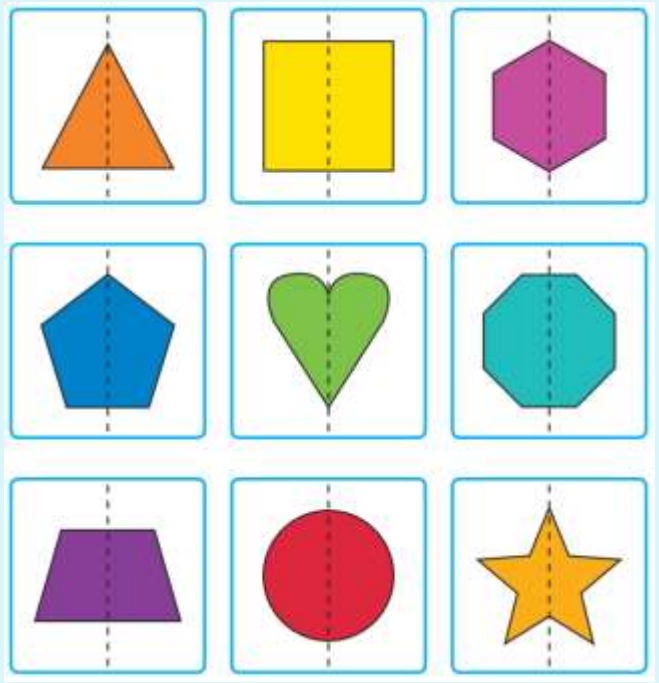
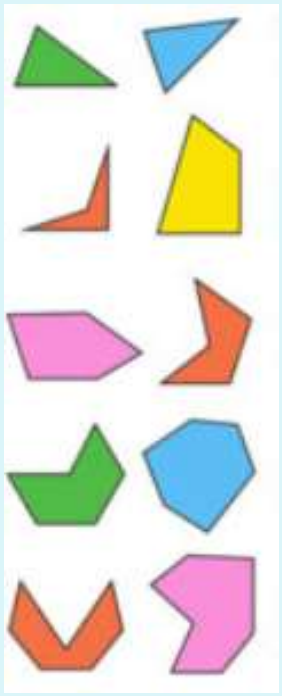
LQ: Can I find lines of symmetry

Not all shapes have lines of symmetry

Regular shapes have lines of symmetry



Irregular shapes do not have lines of symmetry



Self assessment

Do you understand what a line of symmetry is?

23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

What shapes will the folded paper make if I unfold them?

Use the mirror to check what shapes each folded paper will make.

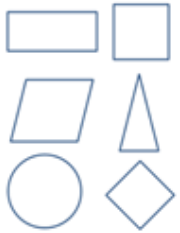
23.02.2024

LQ: Can I find lines of symmetry in 2D shapes?

Self assessment

Do you understand what to do?

Complete the tasks in your book. Use a mirror to help you.

Most		
Fluency	**Reasoning**	**Problem Solving**
1. *Find a line of symmetry and draw it. Remember the two halves need to match.*  *Can you find any more lines of symmetry for each shapes?*	2. *Tommy has placed a mirror on the vertical line of symmetry. This is what he sees:* *Can you complete the other half of the shape?*	3. *Which 2-D shapes can be made when a vertical line of symmetry is drawn on a square?* *Use a squared paper to help you work it out.*