

Hello Year 4!

It's now the second half of the summer term. We are so proud of your hard work with all your online learning.

We know you're giving it your best go!

We have set up your learning for the next week as daily slides for you to follow.

Please follow the instructions on each page to help you - we look forward to hearing about how you have got on!

Miss Hill and Mrs Tally

Notes for Maths Online Learning

- You will need a pencil and a piece of paper, if you have a pad you can keep working from this would be ideal.
- All MyMaths Online lessons will have unlimited availability for you to complete. We will be able to access it each day to see how you got on and if you have completed the task we have set.
- After some sessions there will be a '**extra**' activity if you would like some additional reasoning work to do.
- We will endeavor to provide lessons and activities which you will not need to print off.



St Catherine's Classroom Beliefs

- Mistakes are valuable.
- Everyone can learn maths to the highest level.
- Questions are really important.
- Depth is more important than speed.
- Maths is about making connections.

Session 1



Monday 29th June

Teaching Notes

Note to Parents and Carers

A lot of work we would have done in the classroom for symmetry would have involved mirrors, cutting out shapes, printing them off and folding them to discover the lines of symmetry.

The next few days will have a range of different activities to do to develop their current knowledge and apply this to what they have done with shape so far in Year 4.

Thank you for your ongoing understanding and support with online learning.

Miss Hill and Mrs Tally

Shape: Line of Symmetry

- Find and identify lines of symmetry in a 2D shape
- Explore symmetry in shapes of different sizes and orientations
- **Note:** A shape may be symmetrical, but if the pattern on the shape isn't symmetrical, then the diagram isn't symmetrical.

Vocabulary

Orientation = the way an object or shape is 'pointing' or angled.



Monday 29th June

Maths Chat

- What does symmetrical mean?
- Can you give any real-life examples?
- How can you tell if something is symmetrical?
- Are lines of symmetry always vertical?
- Does the orientation of the shape affect the lines of symmetry?
- What equipment might help you find and identify lines of symmetry?

Monday 29th June

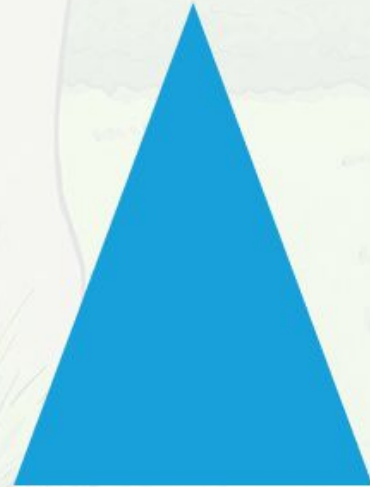
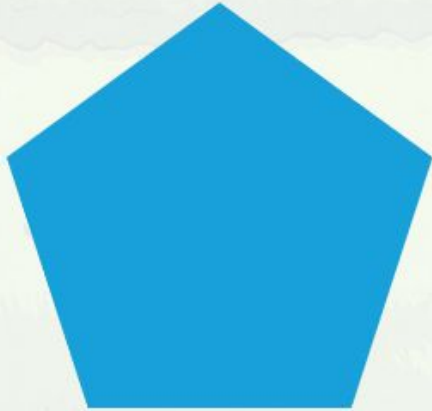
Recognising Lines of Symmetry

Tally's Top Tips

“It can help to hold the shape you are looking at in front of your face and turn the shape around so the line of symmetry is vertical.”

Monday 29th June

Identify the lines of symmetry in these shapes.



Monday 29th June

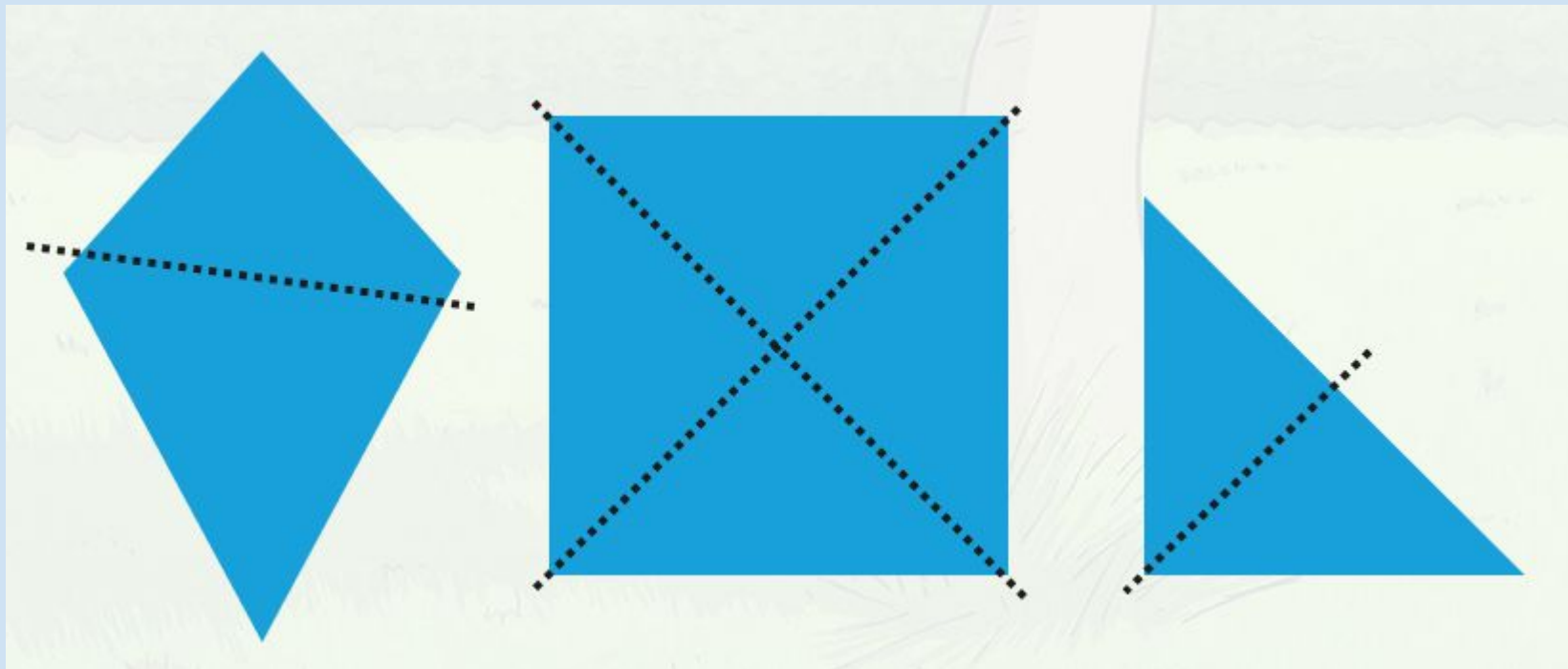


Did you get it right?

Remember...if you were to fold the shape in half, would it look the same on each side?

Monday 29th June

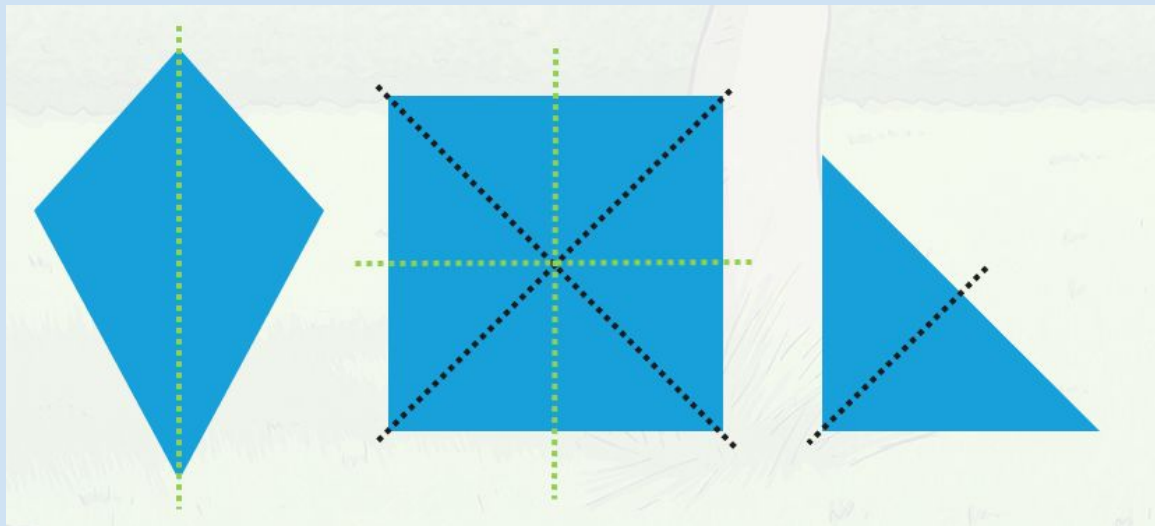
Are these lines of symmetry correct? Are there any missing?
Explain your reasoning to someone, or write it down in clear sentences.



Monday 29th June

Any shapes with equal length sides are a good indicator that there might be 1 or more lines of symmetry.

Draw some of your own to prove it!



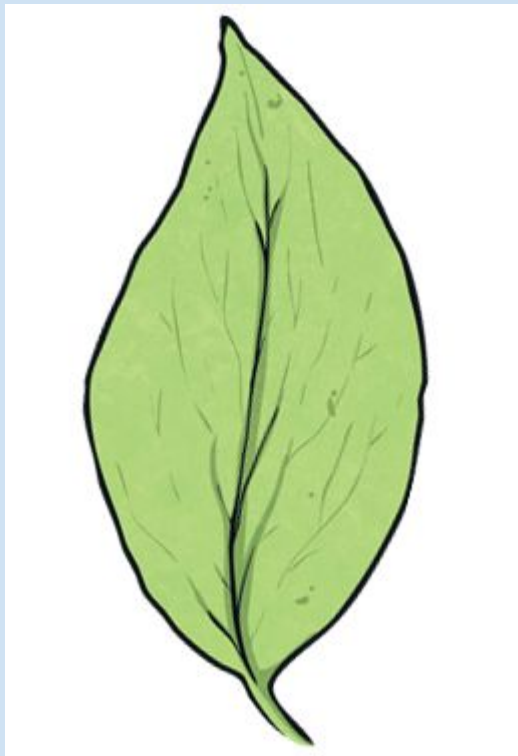
Monday 29th June

Answer these statements with **Always**, **Sometimes** or **Never**.

Draw these shapes as well as the lines of symmetry to explain and support your answer.

- A pentagon has five lines of symmetry.
- A square has four lines of symmetry.
- A scalene triangle has three lines of symmetry.

Monday 29th June



Why is this shape **not** symmetrical?

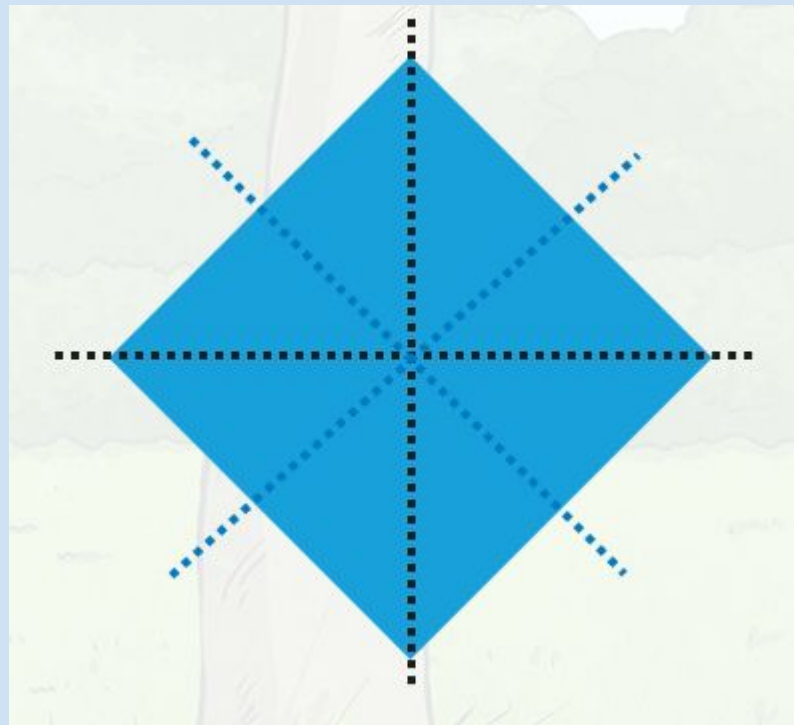
This shape is not symmetrical because...

Monday 29th June

Shapes with both a horizontal and vertical line of symmetry always have diagonal lines of symmetry, just like this one here.



Is she correct?
Explain your answer



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Session 2



Shape: Line of Symmetry

- Find and identify lines of symmetry in a 2D shape
- Explore symmetry in shapes of different sizes and orientations
- **Note:** A shape may be symmetrical, but if the pattern on the shape isn't symmetrical, then the diagram isn't symmetrical.



Tuesday 30th June

Draw all of the lines of symmetry on these shapes using a ruler.



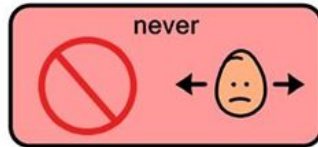
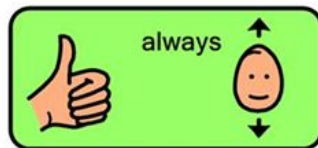
How many lines of symmetry does each shape have? Write the answer under each shape.

Have a go at drawing these shapes on your page (as accurately as possible) then find the lines of symmetry

Tuesday 30th June

Are these statements always, sometimes or never true?

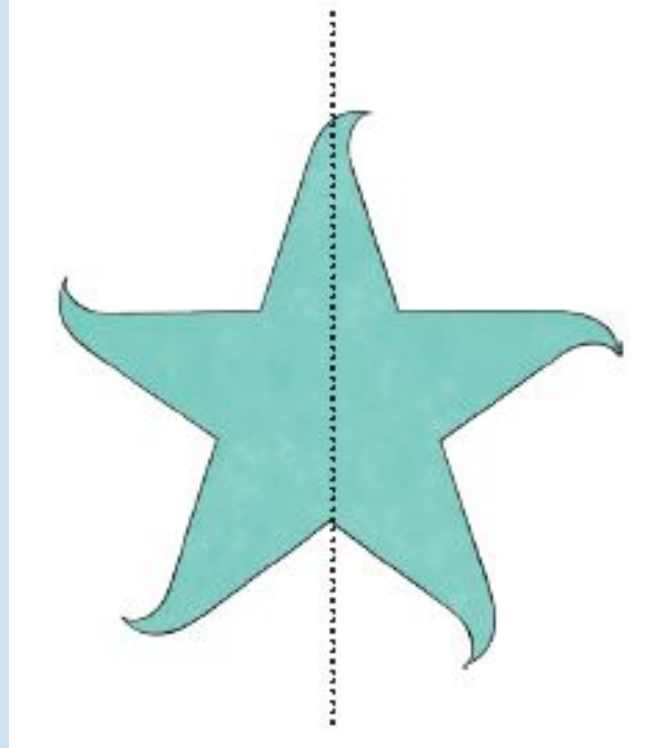
- a) A triangle has at least one line of symmetry. _____
- b) A circle has an infinite number of lines of symmetry. _____
- c) A pentagon has ten lines of symmetry. _____
- d) A parallelogram has no lines of symmetry. _____



Tuesday 30th June

This line of symmetry is incorrect:

Explain why....



Tuesday 30th June

Zainab says, "2D shapes with straight edges always have the same number of sides as lines of symmetry."

Investigate her statement.

Is she correct? _____

How do you know?

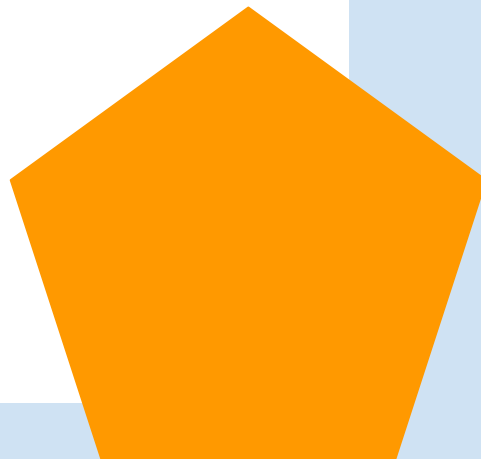
If she is incorrect, what mistake has she made?

Tuesday 30th June

A regular pentagon has _____ lines of symmetry.

Investigate if it is possible to draw an irregular pentagon with:

- 1 line of symmetry;
- 2 lines of symmetry;
- 3 lines of symmetry;
- 4 lines of symmetry;
- more than 5 lines of symmetry.



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Session 3



Shape: Symmetry in real life

- Explore lines of symmetry in your own homes
- Research symmetry in nature
- Create a image using geometrical knowledge

Wednesday 1st July

Symmetry in Nature



Click the Link

Today's activity is going to give you the chance to go and explore symmetry in nature. Either on your daily exercise, a bike ride, walk or venturing into your garden...what can you found, made by nature that is symmetrical.

Take a photograph if you can, or sketch it to show how amazing our world is and how maths can be found even in a flower!

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Session 4



Shape: Consolidating learning

- Angles
 - Acute
 - Obtuse
 - Right angle
- Triangles
 - Isosceles
 - Equilateral
 - Scalene
- Lines
 - Perpendicular and parallel
 - Horizontal and vertical
- Quadrilaterals
 - Four-sided 2D shape
 - Interior angles = 360°
 - Closed shape with straight sides

Thursday 2nd July

Today, we would like you to create a mathematical piece of art!

Your image **must** have the following

- parallel and perpendicular lines
- Horizontal and vertical lines
- 4 acute angles
- 5 obtuse angles
- 6 right angles
- All 3 triangles; isosceles, equilateral, scalene
- At least 4 different types of quadrilaterals
- Some parts of your drawing must be symmetrical



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Session 5



Friday 3rd July

Consolidate learning

Go through the 8 questions on the sheet which are related to angles, triangles and quadrilaterals.

Consider all the learning we have done over the last two weeks and answer the questions to the best of your ability.



Friday 3rd July

Recap all learning by playing...

Guardians: Defenders of Mathematica



Click the Link



Answers

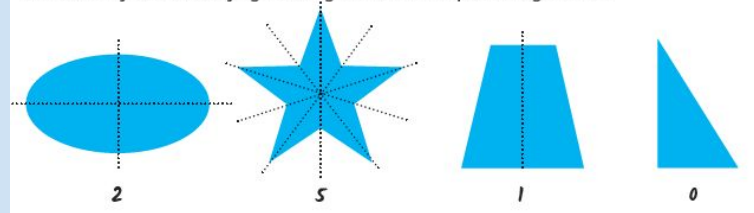
29.06.20

No, here are some examples of shapes with vertical and horizontal lines of symmetry but no others:



30.06.20

Draw all of the lines of symmetry on these shapes using a ruler.



sometimes, always, never, sometimes

The curled points of the star on opposite sides of the line should curl towards each other.

No, Children should be able to show an example of a shape with lines of symmetry not equal to the number of sides, or a set of shapes with the same number of sides but different numbers of lines of symmetry.

She has only thought about regular shapes..