



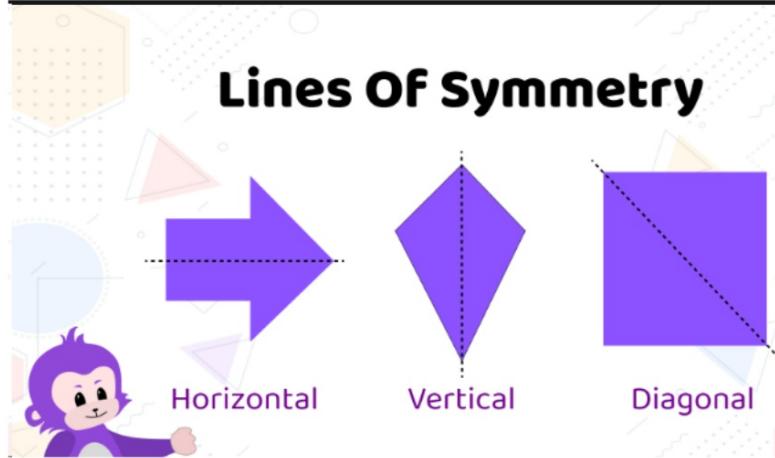
## Find Lines of Symmetry

Student's Book p.74

What You Will Learn:

- Identify symmetrical figures.
- Draw all lines of symmetry in 2D shapes and patterns.

A line of symmetry is the line that divides a shape or an object into 2 equal and symmetrical parts.

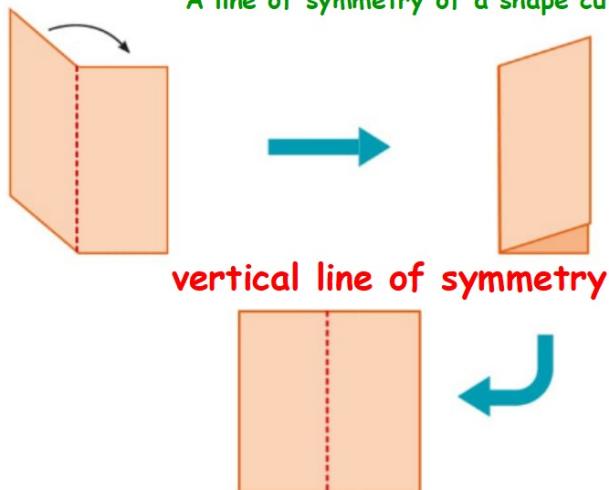


## Look Back

Student's Book p.74

Ron folds a square piece of paper into half to find its line of symmetry.

A line of symmetry of a shape cuts the shape exactly in half.



4 lines of symmetry  
4 sides  
4 vertices  
4 angles

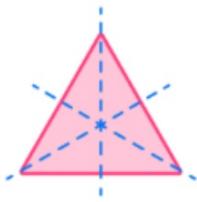
Does the piece of paper have another line of symmetry? **Yes**

How do you find out? Discuss it with your partner.

all of its sides are equal

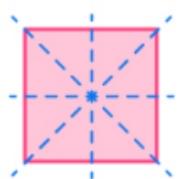
**Equilateral triangle:**

3 lines of symmetry



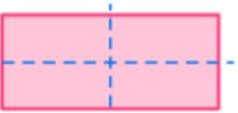
**Square:**

4 lines of symmetry



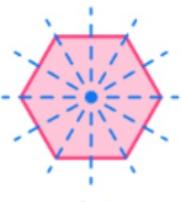
**Rectangle:**

2 lines of symmetry



**Regular hexagon:**

6 lines of symmetry



Student's Book p.74

## Thinking Cap



Do you think that there are other lines of symmetry on the square paper? Make a conjecture and explain why. Fold a square paper to check your answer.



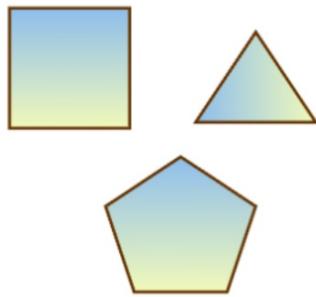
A square has 4 lines of symmetry: 1 vertically, 1 horizontally, 2 diagonally

A polygon can be categorized as a regular or irregular polygon based on the length of its sides and the measure of its angles.

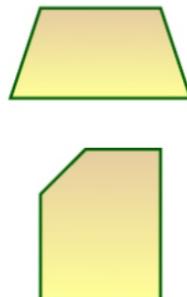
In a regular polygon all sides and angles are equal.

In an irregular polygon sides and angles are not equal.

## Polygons



Regular Polygon

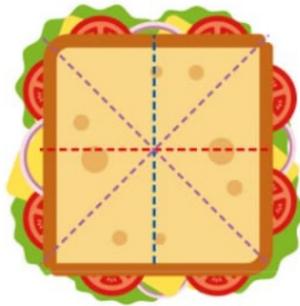


Irregular Polygon

## Let's Learn

Student's Book p.75

- Squares are regular polygons. They have more than 2 **lines of symmetry**.  
A square has a **horizontal** line of symmetry, a **vertical** line of symmetry and 2 **diagonal** **lines of symmetry**

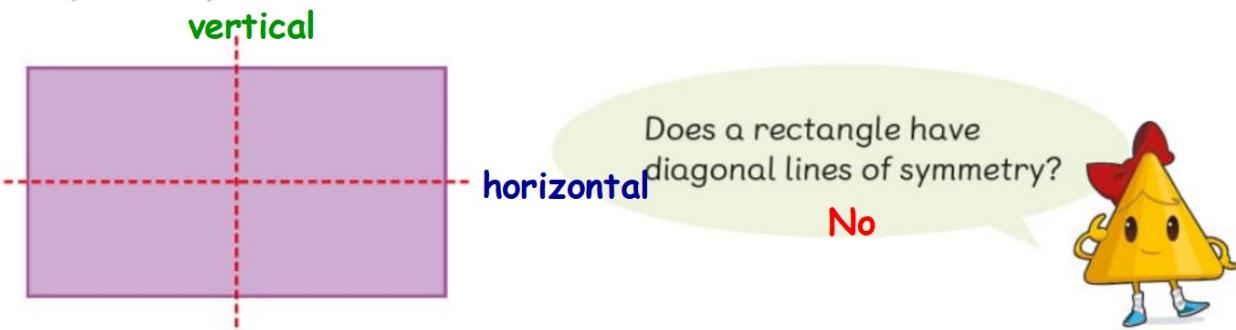


A regular polygon is a polygon with all sides equal.

A square is a regular polygon that has 4 equal sides.  
So, it has 4 lines of symmetry.

## Student's Book p.75

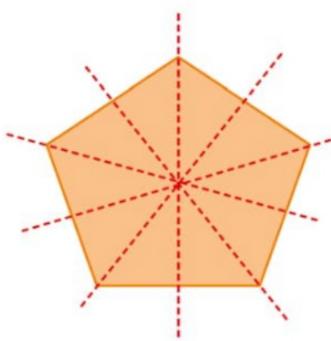
b Rectangles have a horizontal line of symmetry and a vertical line of symmetry.



A rectangle is an irregular polygon.  
It has 4 sides but not all of them are equal.

## Student's Book p.75

c Look at the regular polygon.



5 sides  
5 angles  
5 vertices

A regular pentagon has 5 sides.  
It has 5 lines of symmetry.

How many lines of symmetry does a regular hexagon have?

6 lines of symmetry

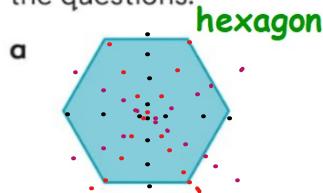
The number of sides and the number of lines of symmetry of a regular polygon are the same.



## Let's Practise

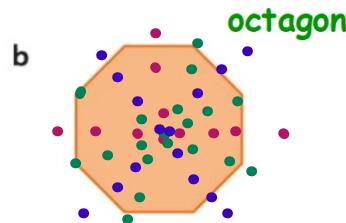
## Student's Book p.76

I Draw all the lines of symmetry of each regular polygon. Then answer the questions.



This regular polygon has  
6 sides.

It has 6 lines of symmetry.



This regular polygon has  
8 sides.

It has 8 lines of symmetry.



What do you notice about the number of sides and the number of lines of symmetry of a regular polygon?

**The number of sides and the number of lines of symmetry of a regular polygon are the same.**

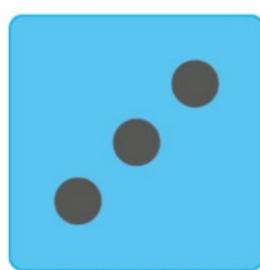
2 Draw all the lines of symmetry for each object or pattern.

**Student's Book p.76**

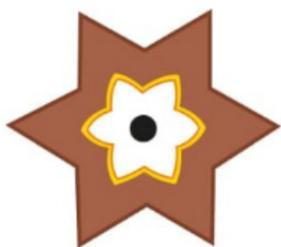
a



b

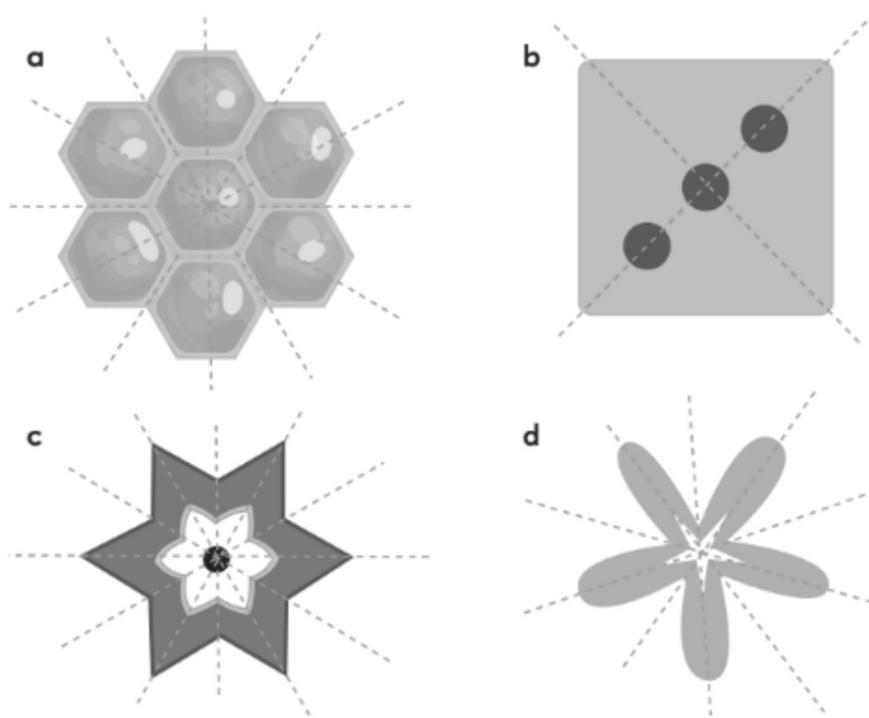


c



d

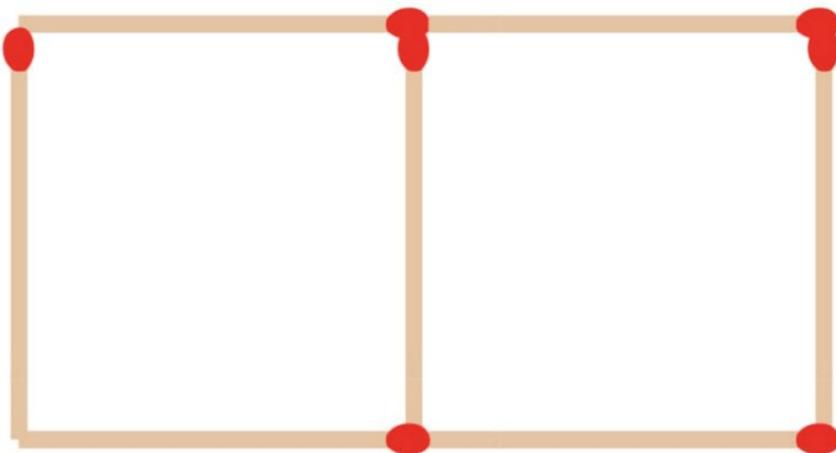




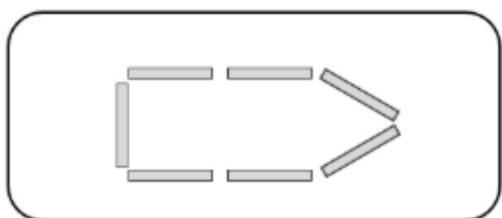
**Student's Book p.77**



3 Move two match sticks so that the figure has exactly one line of symmetry. Draw your diagram and the line of symmetry. Show your partner how you did it.



## Student's Book p.77



Tick (✓) to show what you can do.

- I can identify symmetrical figures.
- I can draw all lines of symmetry in 2D shapes and patterns.