



**WELCOME**

we're glad you're here



LET

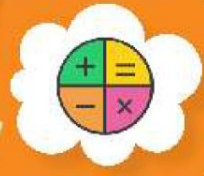
the

ADVENTURE

Begin

# Chapter 4

## Mathematics and Geometry





Pirates of the Carribbean

Lines are fundamental elements in geometry, characterized by their length and direction.



length

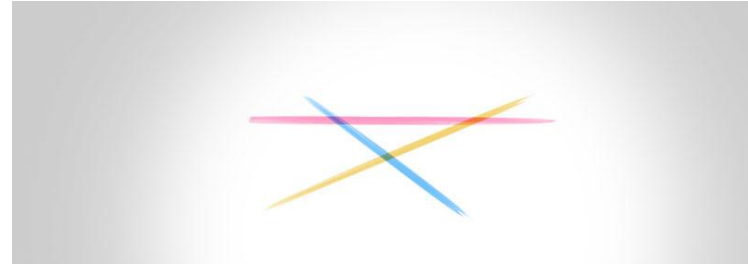


direction



Here are some common types of lines:

Straight line



A line that extends definitely in both directions and does not curve.

Straight line



Curved line



A curved line is a type of line that **does not** follow a **straight path**.

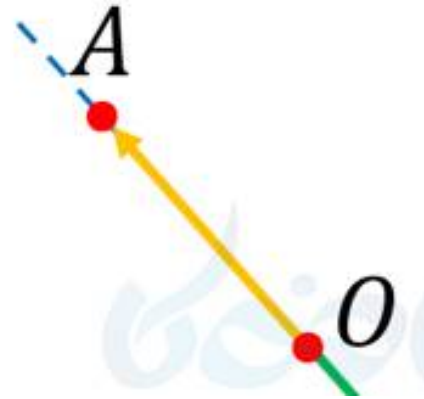
Curved line



A part of a line that has **one endpoint** and extends infinitely in one direction.

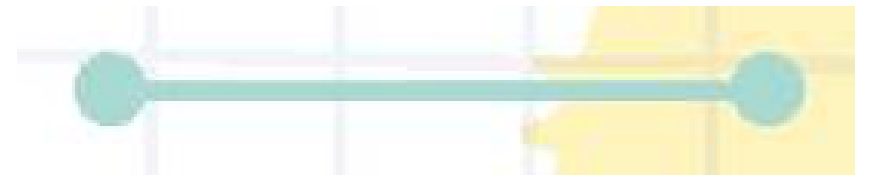


Line Segment



A type of line that has two endpoints.

Line Segment



Parallel lines



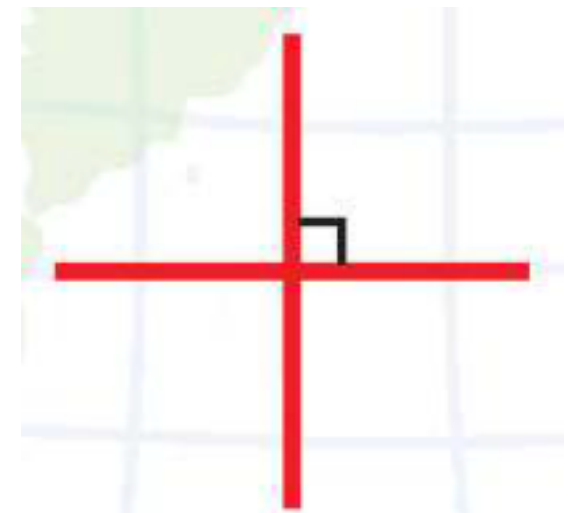
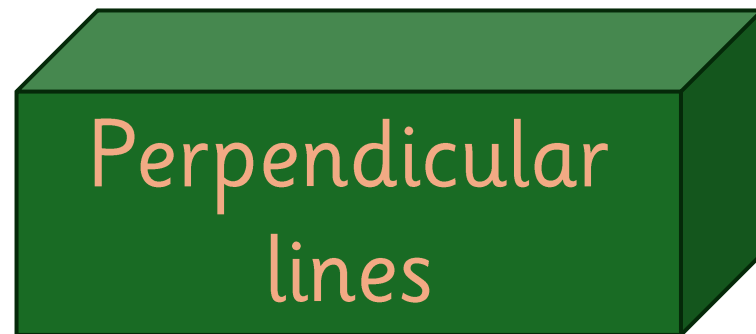
Lines in a same plane that do not intersect. They remain equidistant from each other at all points.

Parallel lines



# Perpendicular lines

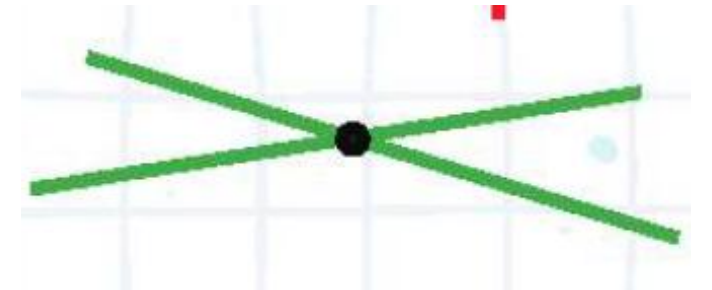
Lines that intersect at a right angle (90 degrees).



Intersecting  
lines

Lines that cross or meet at a common point.

Intersecting  
lines





## Pirates of the Caribbean

Lines are fundamental elements in geometry, characterized by their length and direction. Here are some common types of lines:

### **Straight Line:**

A line that extends indefinitely in both directions and does not curve.



### **Curved line:**

A curved line is a type of line that does not follow a straight path.



### **Ray:**

A part of a line that has one endpoint and extends infinitely in one direction.



### **Line Segment:**

A part of a line that has two endpoints.



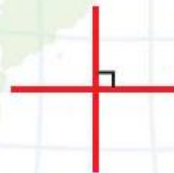
### **Parallel Lines:**

Lines in the same plane that do not intersect. They remain equidistant from each other at all points.



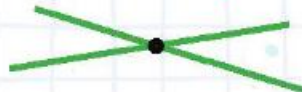
### **Perpendicular Lines:**

Lines that intersect at a right angle (90 degrees).

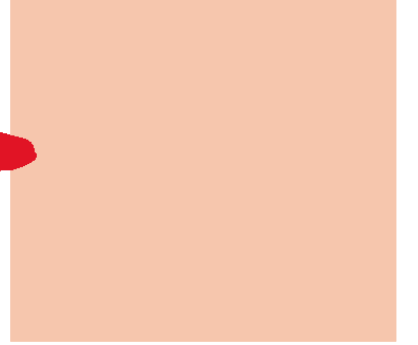
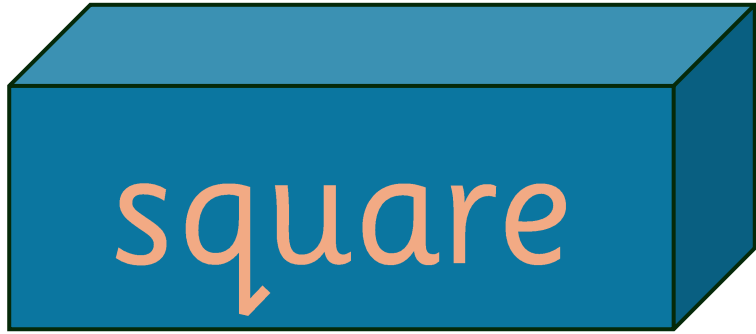


### **Intersecting Lines:**

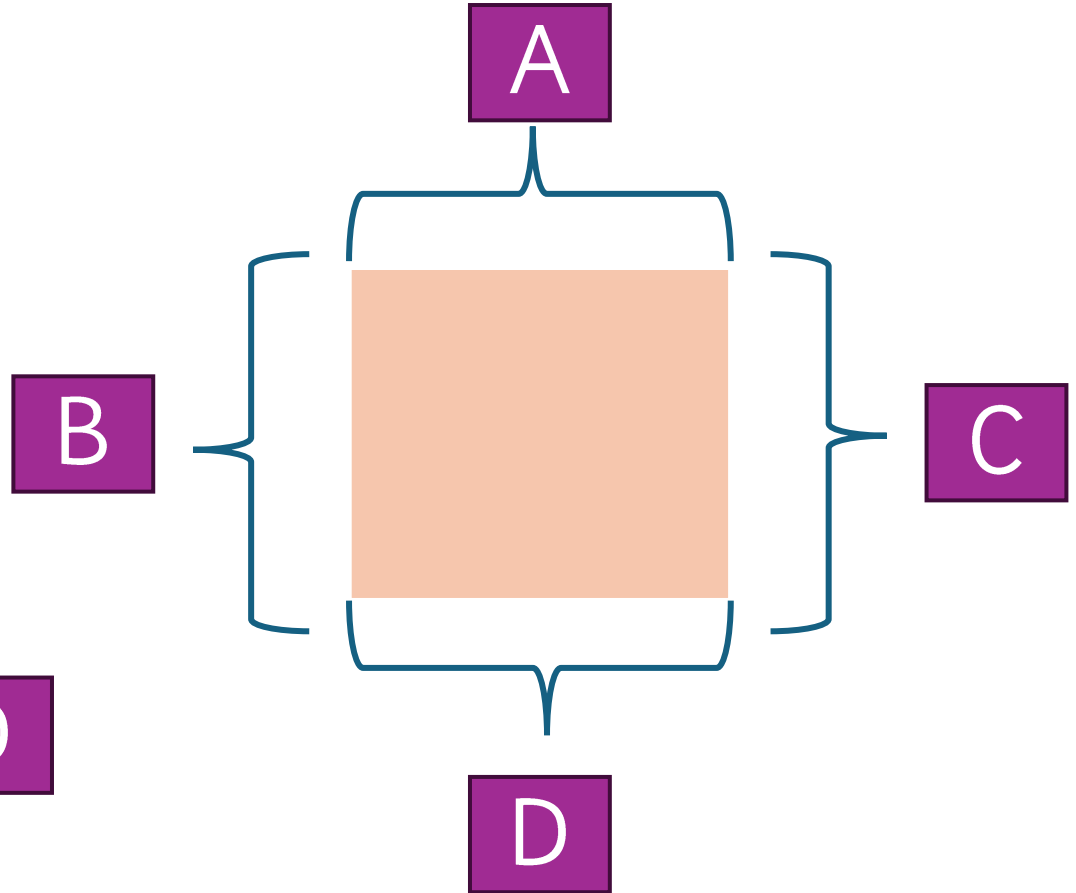
Lines that cross or meet at a common point.



Common 2D shapes

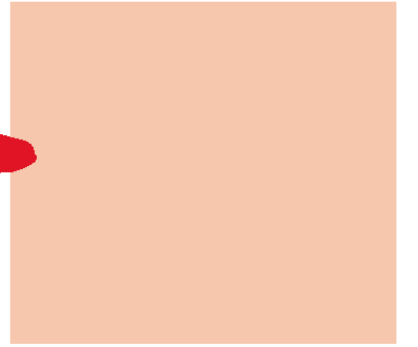
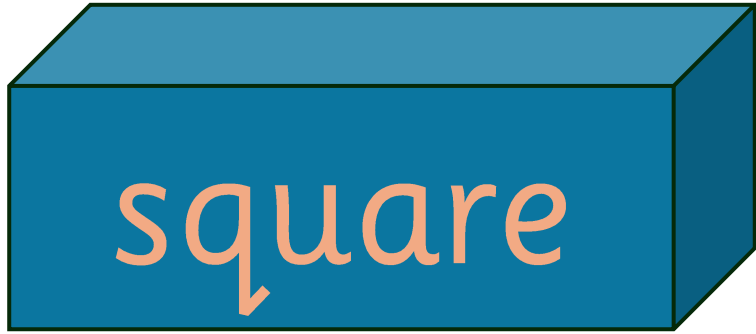


1) All sides are equal in length.

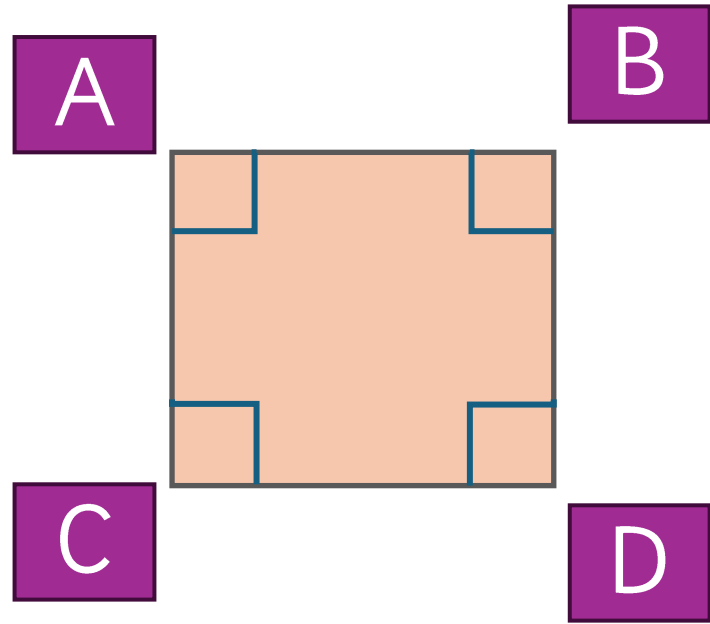


$$A = B = C = D$$

Common 2D shapes

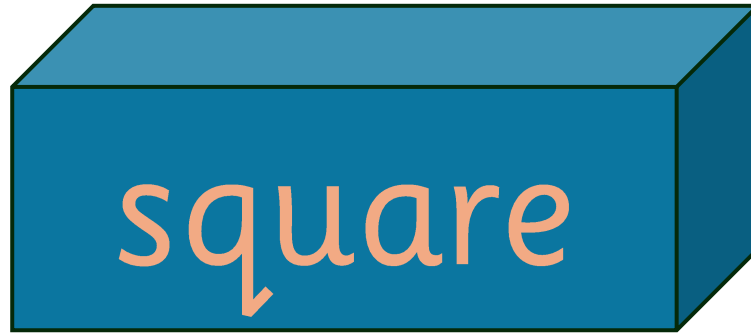


2) All angles are **right angles**. (90 degrees.)



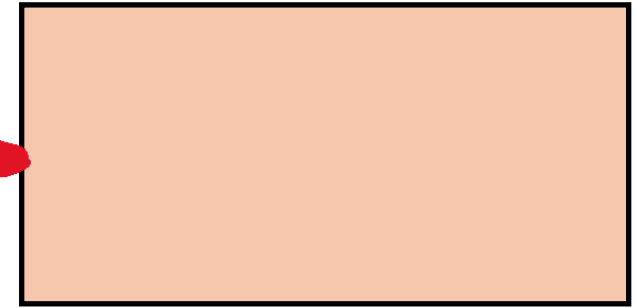
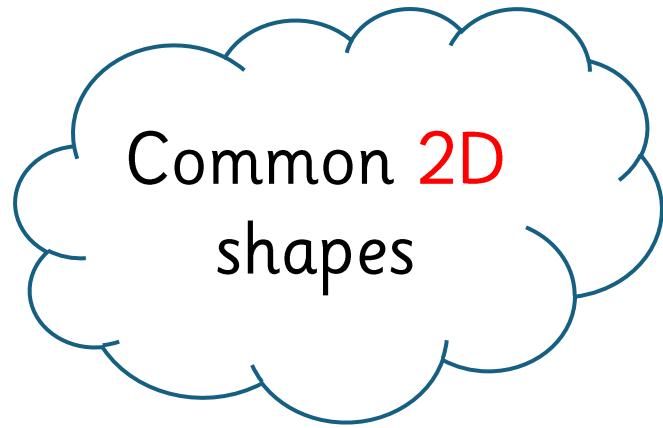
$$A = B = C = D = 90 \text{ degrees}$$

Common 2D  
shapes



3) Opposite sides are parallel and equal in length.



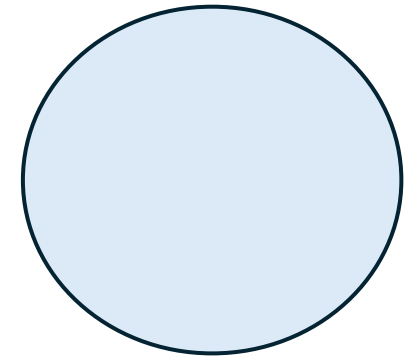
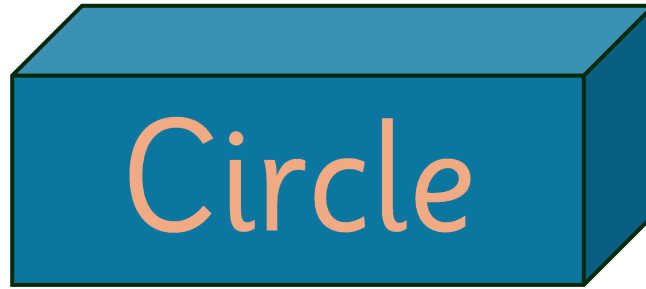
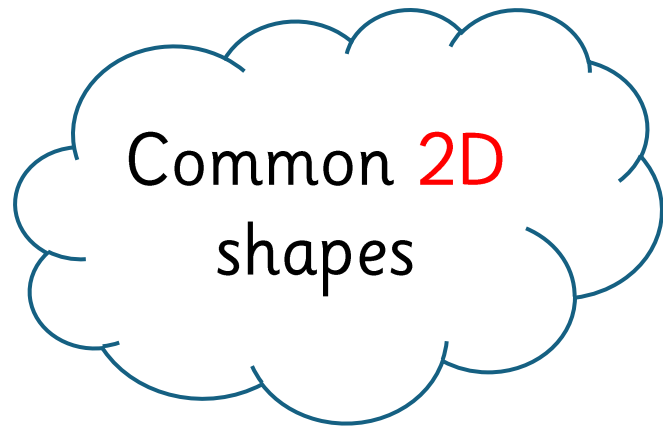


1) Opposite sides are **equal** in length.

2) All angles are **right angles**. (90 degrees.)

3) **Opposite** sides are **parallel**.



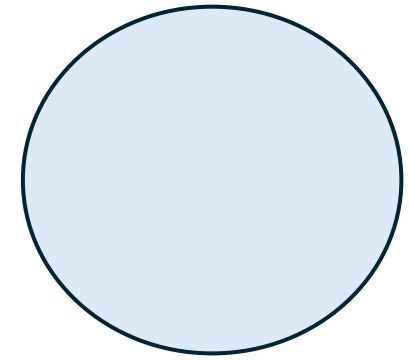
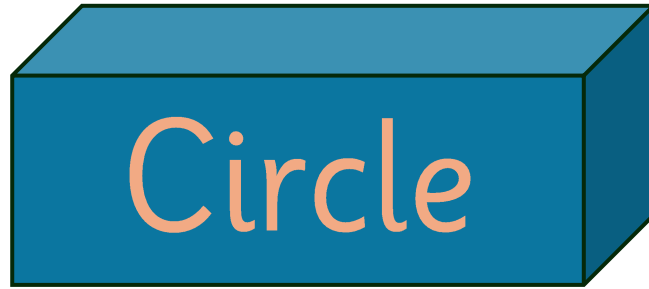
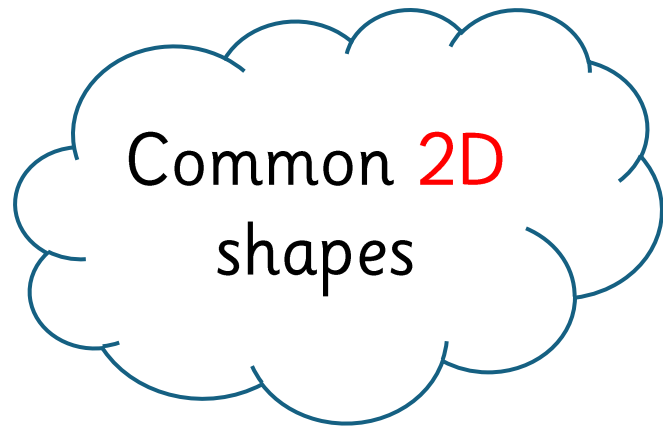


1) No **straight** sides; consists of **curved** boundary.

2) No **angles**.

3) All **points** on the **boundary** are **equidistant** from the **centre**.



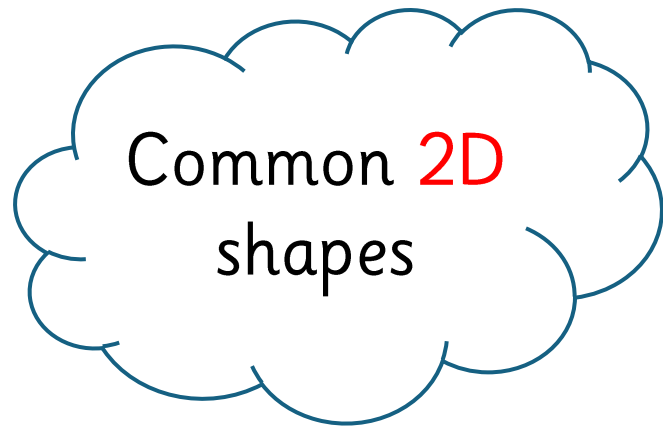


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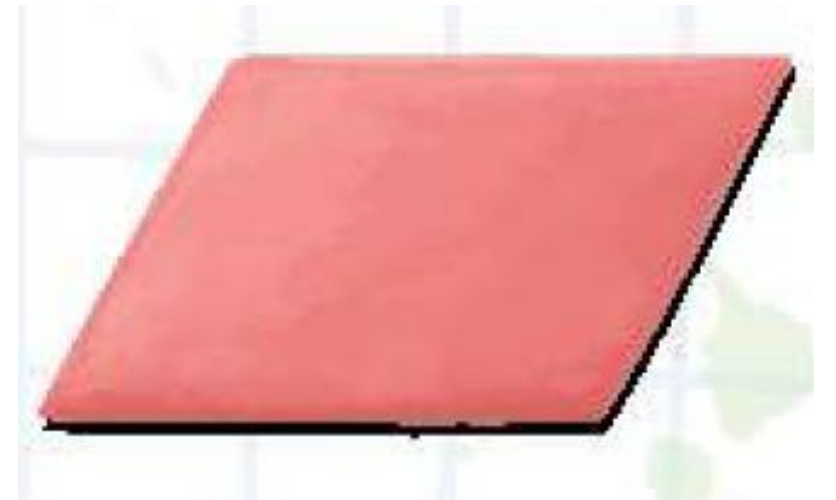


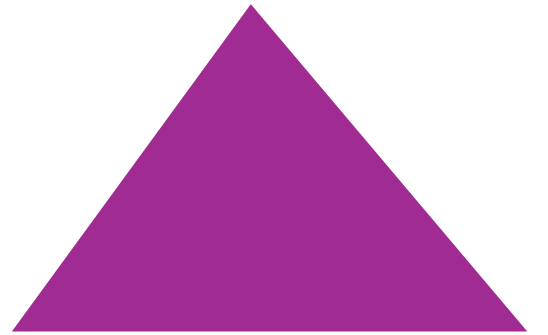
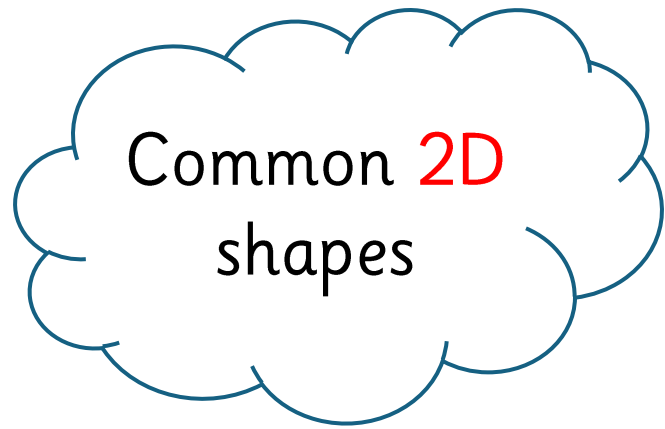


1) Opposite sides are equal in length.

2) Opposite angles are equal.

3) Opposite sides are parallel.



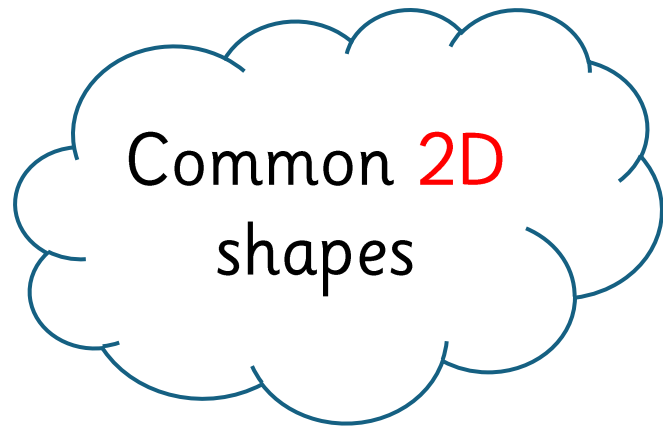


1) Three sides.

2) Three angles.

3) The sum of interior angles is always 180.





1) At least **one pair** of **parallel** sides.

2) **All sides** are **equal** in **length**. (Unless it's an **isosceles** trapezoid.)





## Common 2D Shapes

### Square

- All sides are equal in length.
- All angles are right angles (90 degrees).
- Opposite sides are parallel and equal in length.



### Rectangle:

- Opposite sides are equal in length.
- All angles are right angles (90 degrees).
- Opposite sides are parallel.



### Circle:

- No straight sides; consists of a curved boundary.
- No angles.
- All points on the boundary are equidistant from the center.



### Parallelogram:

- Opposite sides are equal in length.
- Opposite angles are equal.
- Opposite sides are parallel.



### Triangle:

- Three sides.
- Three angles.
- The sum of interior angles is always 180 degrees.



### Trapezoid

- At least one pair of parallel sides.
- No sides are equal in length (unless it's an isosceles trapezoid).



*Thank You*

