



Maths

Properties of Shapes

Aim

- I can draw circles accurately using a pair of compasses and I can identify and label the parts of a circle.

Success Criteria

- I can use a pair of compasses to draw a circle.
- I can label the radius, diameter and circumference of a circle.

Geometry Riddles



Clue 1: My interior angles total 540° .

Clue 2: I am regular.

Clue 1: I have 5 straight sides.

Geometry Riddles



Clue 1:

I have three faces.

Clue 2: Two of my faces are circles.

Clue 1: My other face is a rectangle.

Geometry Riddles



Clue 1:

I am a quadrilateral.

Clue 2: I have one pair of parallel sides.

Clue 1: I have two pairs of equal angles.

Geometry Riddles



Clue 1: I have 5 faces
and 5 vertices.

Clue 2: Four of my
faces are triangles.

Clue 1: My fifth face
is a square.

Geometry Riddles



Clue 1:

I am a quadrilateral.

Clue 2: All my sides
are congruent.

Clue 1: I have two
pairs of opposite,
congruent angles.

Geometry Riddles



Clue 1:

I am a prism.

Clue 2:

I have five faces.

Clue 1: Three of my
faces are rectangular.

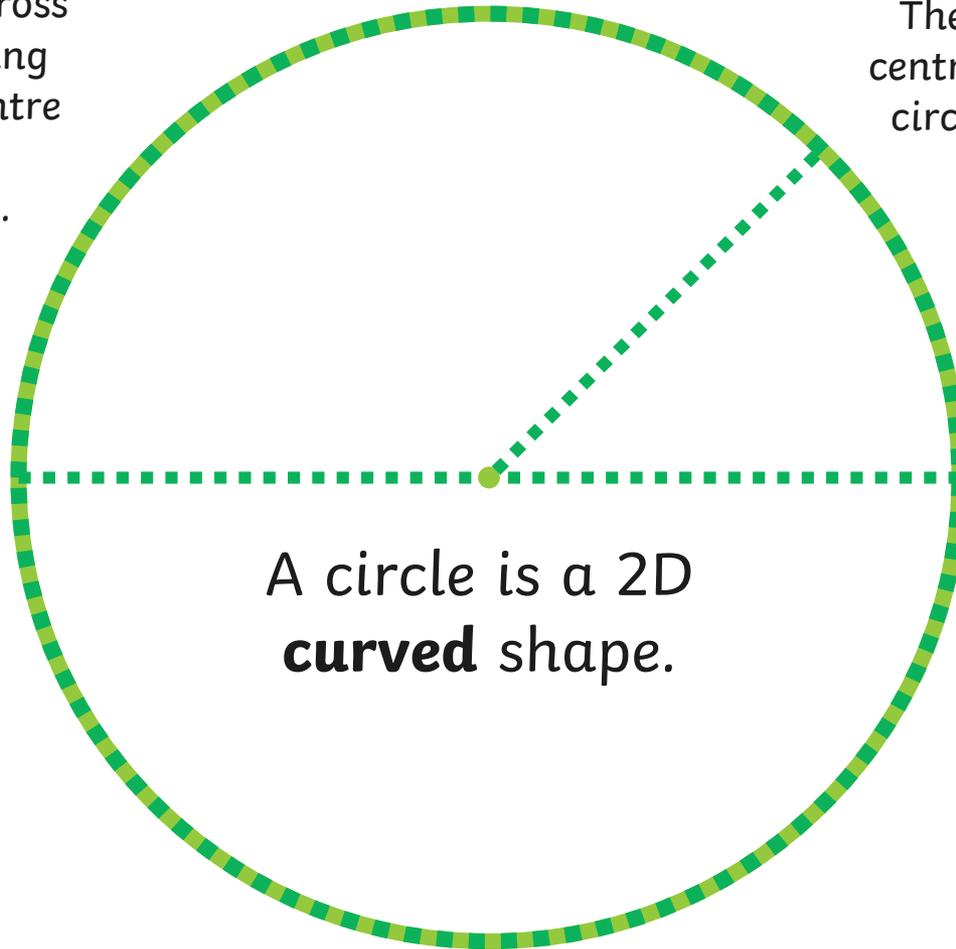
Riddle answers

1. Regular pentagon
2. Cylinder
3. An isosceles trapezium
4. A square based pyramid
5. A rhombus
6. A triangular prism

All About the Circle

The distance across the circle passing through the centre is called the **diameter** (d).

The distance from the centre of the circle to the circumference is called the **radius** (r).

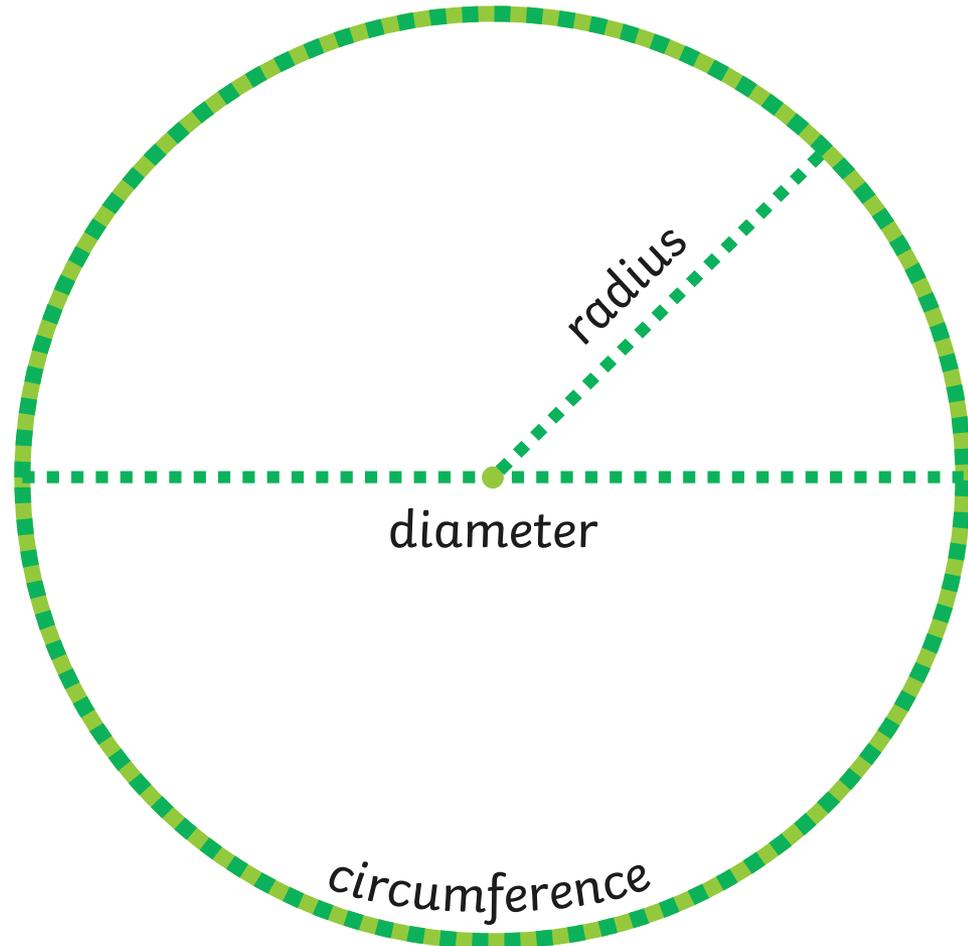


A circle is a 2D **curved** shape.

The perimeter of a circle is called the **circumference** (c).

All About the Circle

Here are the **circumference** (c), **radius** (r) and **diameter** (d) labelled on the same circle.



Activity

- Complete circles riddles worksheet
- If you have a compass at home, use the following slides to help you learn how to use it correctly. Use your compass to draw different circles with a diameter of 4,6,8 and 10 centimetres. Remember to label the parts of your circle.
- If you do not have a compass at home, find circular objects from around your house and draw around them on plain paper. Can you then measure the radius and diameter using a ruler?

Using a Pair of Compasses



When we need to draw a circle we use a mathematical tool called a **pair of compasses**.



Using a Pair of Compasses



First we place our pencil in the holder and make sure the tip of the pencil and the needle are level. Then, we tighten the pencil holder grip so the pencil won't move around.



Using a Pair of Compasses



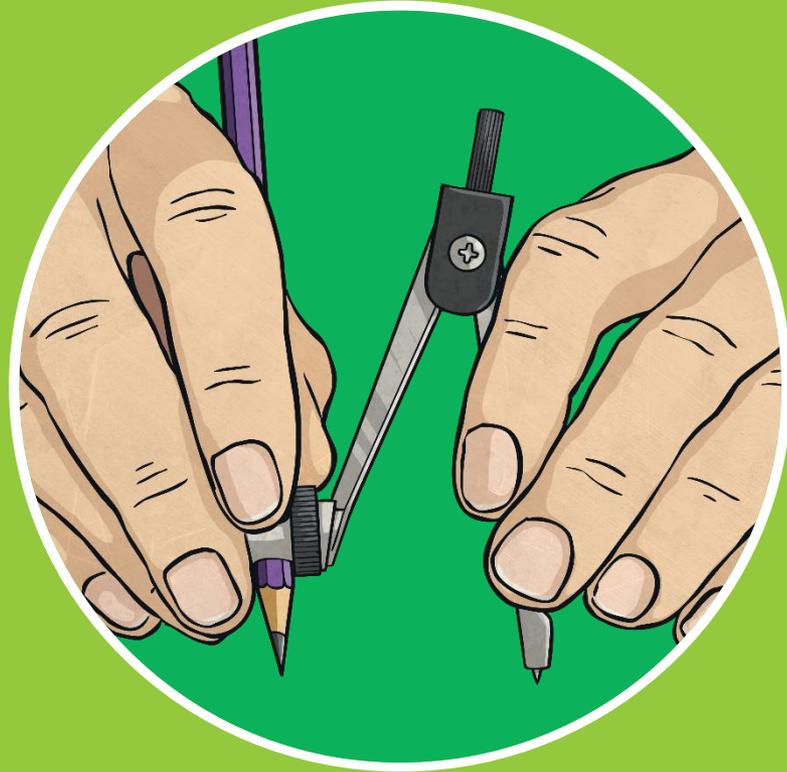
Hold the top of the pair of compasses with your thumb and first finger. Place the needle onto the paper and gently spin the pencil around the needle, keeping the needle completely still.



Using a Pair of Compasses



Have a go at drawing some of your own circles using your pair of compasses.



Drawing Circles to a Measurement

When you are asked to draw a circle to a given measurement, you have to adjust the arms of the pair of compasses to the correct length.

For example, to draw a circle with the radius of 4cm, you have to set the distance of the arms to 4cm using a ruler.

