GCSE Maths – Geometry and Measures

Properties of Circles

Worksheet

NOTES

SOLUTIONS

This worksheet will show you how to work out questions related to properties of circles. Each section contains a worked example, a question with hints and then questions for you to work through on your own.
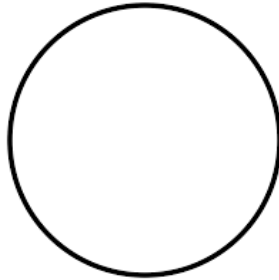
Section A

Worked Example
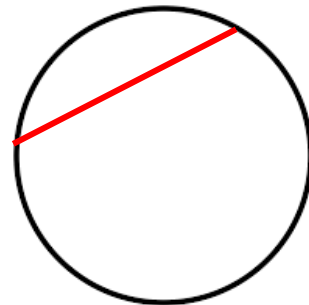
Draw a chord on the circle.

Step 1: Give the meaning of a chord.

A chord is a straight line joining two points on the circumference.
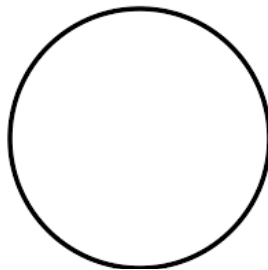
Step 2: Use the definition to accurately draw the chord.

Mark two points of the circumference of the circle.
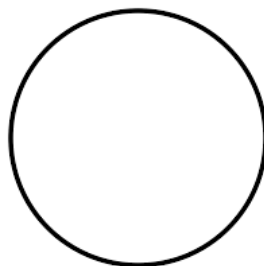*Join the two points to create a chord.*

Guided Example

Draw a diameter on this circle

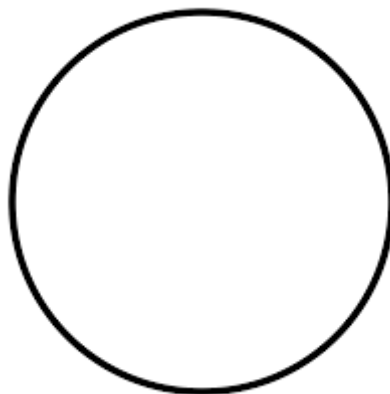**Step 1**: Give the meaning of a diameter.

Step 2: Use the definition to accurately draw the diameter.

Now it's your turn!
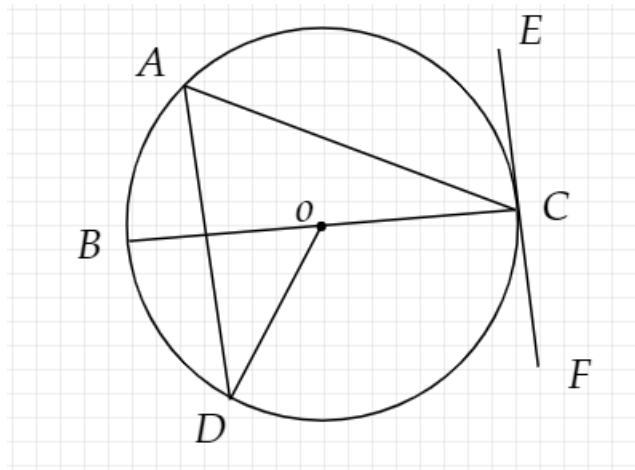If you get stuck, look back at the worked and guided examples.

1. A circle is shown below.

a) Draw a radius on this circle.

b) The radius of a circle is 6.8 cm. What is the length of the diameter?

c) The diameter of a circle is 28 cm. What is the length of the radius?

d) The diameter of a circle is 3.4 cm. Calculate the circumference of the circle to 1 decimal place.

2. Consider the following diagram.

Define the following:

a) AC
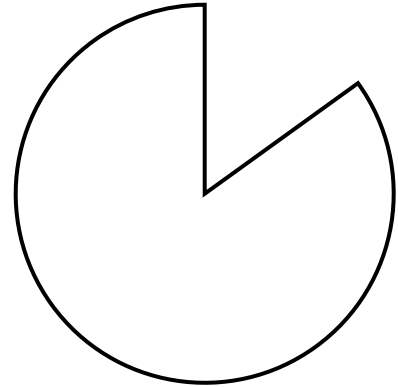

b) AD

c) OC

d) BC

e) OD

f) EF

3. A circle has diameter 10 cm. Taking $\pi = 3$, find the perimeter of the circle.
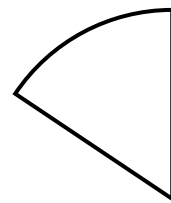
4. A circle has radius 3.5 cm. Taking $\pi = 3.14$, find the perimeter of the circle.

5. A circle has perimeter 12 cm. Taking $\pi = 3$, find the radius of the circle.

6. A circle has perimeter $(3x + 21)$ cm. Taking $\pi = 3$, find the radius of the circle in terms of x.

7. A sector of a circle with arc length 3 cm is cut out of the circle. If the radius is 5 cm, find the perimeter of the shape to the nearest centimetre.

8. The perimeter of a circle is 24 cm. A sector is cut out with arc length 3 cm. What is the perimeter of the sector?

9. The radius of this shape is 3 cm. What is the perimeter of the shape?