ASPIRE TO POWER LEARNING

Year 7 | Measurement

Circles: radius diameter and circumference

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the explanation and worked example. Show your working; use a calculator only where asked.

What you will practise

• Connect the radius, diameter and circumference of a circle.

• Explain a method and check the reasonableness of a result.

Useful starting skills: Use the prerequisite operations and representations shown in the worked example.

A radius joins the centre to the circle. A diameter passes through the centre and is twice the radius: $d=2r$.

For every circle, circumference divided by diameter equals π. Therefore $C=\pi d=2\pi r$. Give exact answers in π or use calculator π when asked for decimals.

Worked example

A circle has diameter 12 cm. Find radius and exact circumference.

Radius$=12/2=6$ cm.

$C=\pi d=12\pi$ cm.

Answer: 6 cm; 12π cm

Try it yourself

Name: _____ Date: _____

1. Find diameter when radius is 8 cm.

2. Find radius when diameter is 19 m.

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. 16 cm

$d=2r.$

2. 9.5 m

$r=d/2.$

Curriculum reference: VC2M7M03

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