

5 Area and circles – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English

Write it 3 times (English)

area

radius

diameter

circumference

Recall

The **area** of a shape is the amount of space inside it, measured in square units (e.g. cm^2).

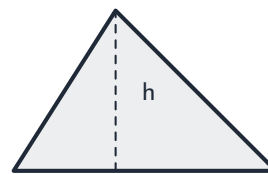
New ideas

Read these first, then do the Practice.

■ 1 Area of a rectangle and a triangle



base
area = base $\times$ height

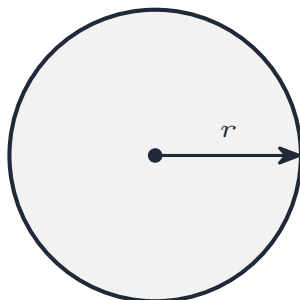


base
area = $\frac{1}{2} \times$ base $\times$ height

- rectangle: area = base $\times$ height;
- triangle: area = $\frac{1}{2} \times$ base $\times$ height.

■ 2 The circle

A circle has a **radius** r (centre to edge) and a **diameter** $d = 2r$:



circumference = πd

area = πr^2

(diameter $d = 2r$)

- **circumference** = πd ;
- area = πr^2 .

Watch out: **area** is in *square* units (cm^2); **perimeter/circumference** is a length (cm). For a circle, **circumference** = πd but **area** = πr^2 – use the radius for the area, and remember $d = 2r$.

Practice

Try these in order.

5.6 Find the area of a rectangle 7 cm by 3 cm.

[2]

5.7 Find the area of a triangle with base 6 cm and height 4 cm.

[2]

5.8 A circle has a radius of 5 cm. Write down its diameter. [1]

5.9 Find the circumference of a circle with diameter 10 cm. (Use $\pi \approx 3.14$.) [2]

5.10 Find the area of a circle with radius 3 cm. (Use $\pi \approx 3.14$.) [2]

5.11 Challenge. A circle has a diameter of 14 cm. Find its area. (Use $\pi \approx 3.14$.) [3]