

5 Area and circles – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

Write each word three times. 把每个单词抄写三遍。

English	中文	Write it 3 times (English)
area	面积	_____
radius	半径	_____
diameter	直径	_____
circumference	周长	_____

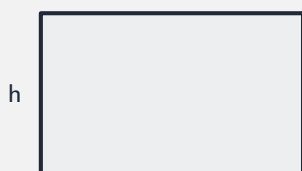
Recall

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

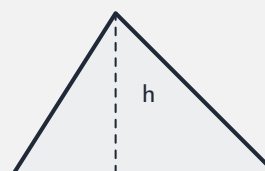
New ideas

Read these first, then do the Practice.

■ 1 Area of a rectangle and a triangle



area = base $\times$ height



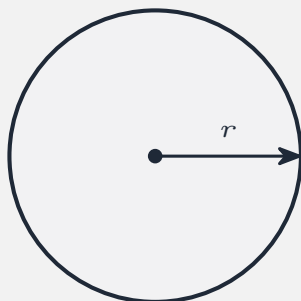
area = $\frac{1}{2} \times$ base $\times$ height

- rectangle: area = base $\times$ height;

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

■ 2 The circle

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



$$\text{circumference} = \pi d$$

$$\text{area} = \pi r^2$$

$$(\text{diameter } d = 2r)$$

- **circumference** 周长 $= \pi d$;
- $\text{area} = \pi r^2$.

Watch out: **area** is in *square* units (cm^2); **perimeter/circumference** is a length (cm). For a circle, **circumference** $= \pi d$ but **area** $= \pi r^2$ —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]