Your notes

KS3 Maths: revision notes

Area and perimeter

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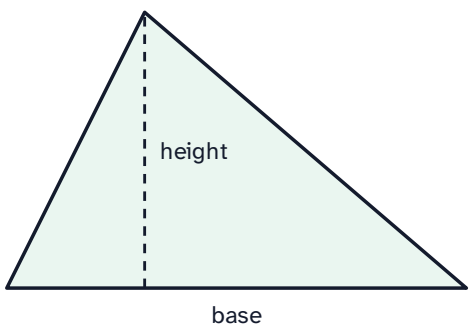
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Perimeter

- The **perimeter** is the distance around the outside of a shape. Add up all the sides.
- A rectangle 8 cm by 5 cm has a **perimeter** of 8 + 5 + 8 + 5 = 26 cm.

Area

- Rectangle: length × width. A rectangle 8 cm by 5 cm has an **area** of 40 cm^2.
- Triangle: ½ × base × **perpendicular height**. Parallelogram: base × **perpendicular height**.
- Trapezium: ½ × (a + b) × h, where a and b are the parallel sides.
- **Compound shapes**: split them into rectangles and triangles, then add the **areas**.
- **Area** is measured in square units, such as cm^2 and m^2. 1 m^2 = 10 000 cm^2.



Circles

- **Circumference** = π × diameter (or 2 × π × radius). With π = 3.14, a circle with a diameter of 10 cm has a **circumference** of 31.4 cm.
- **Area** = π × $radius^2$. A circle with a radius of 10 cm has an **area** of 3.14 × 100 = 314 cm^2.

- π (pi) is about 3.14. Use the π button on a calculator for more accuracy.

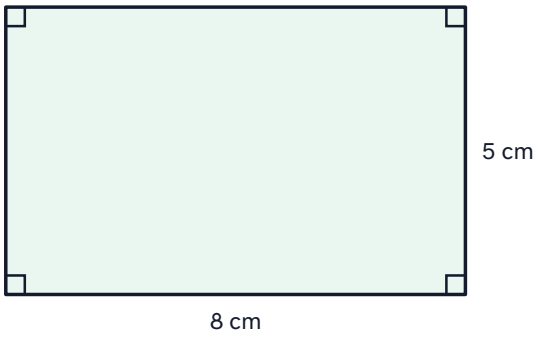
Key terms

Perimeter	The distance around the outside of a shape.
Area	The amount of space inside a 2D shape.
Perpendicular height	The height measured at right angles to the base.
Circumference	The distance around a circle.
Pi (π)	The ratio of a circle's circumference to its diameter, about 3.14.
Compound shape	A shape made from two or more simpler shapes.
Square centimetre	A unit of area: a square with sides of 1 cm (cm^2).

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is the perimeter of a rectangle 8 cm by 5 cm?



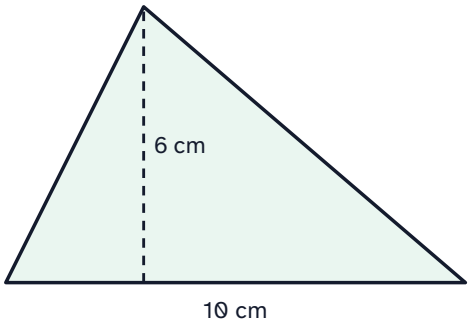
2. What is the area of a rectangle 8 cm by 5 cm?



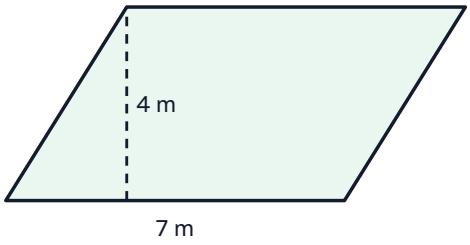
3. How do you find the area of a triangle?

Your notes

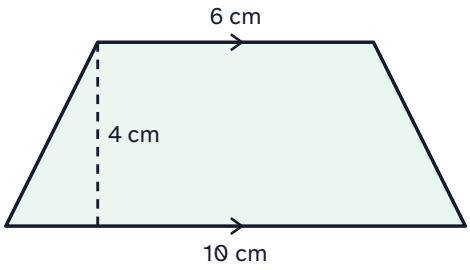
4. What is the area of a triangle with a base of 10 cm and a height of 6 cm?



5. What is the area of a parallelogram with a base of 7 m and a perpendicular height of 4 m?

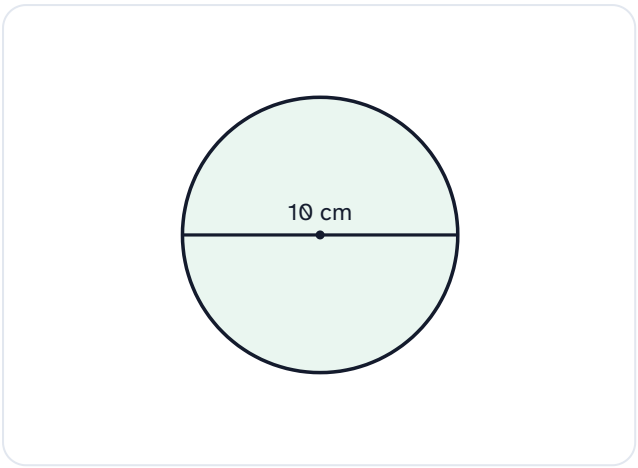


6. What is the area of a trapezium with parallel sides of 6 cm and 10 cm and a height of 4 cm?

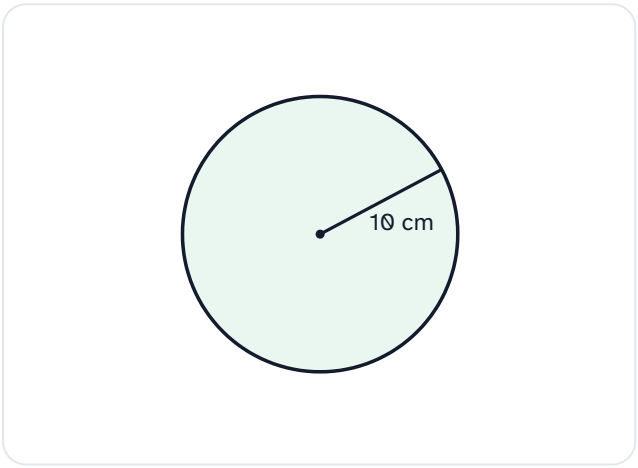


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7. What is the circumference of a circle with a diameter of 10 cm? (Use π = 3.14.)



8. What is the area of a circle with a radius of 10 cm? (Use π = 3.14.)



Answers

1. 26 cm
2. 40 cm^2
3. Half of the base times the perpendicular height
4. 30 cm^2
5. 28 m^2
6. 32 cm^2
7. 31.4 cm
8. 314 cm^2

What to do next

Practise 12 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

Free revision for GCSE and KS3 at lycolearn.co.uk. Some notes are for one exam board only, and say so in brackets.

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