

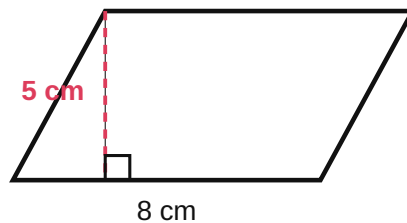
Boost Free Lessons - Year 6 Maths

Lesson 16: Area of Parallelograms

Name: _____ Grade: _____ Date: _____

Worked Example 1

Find the area of the parallelogram below.



1. A parallelogram can be cut and rearranged into a **rectangle** of the same area.
2. So the area is base $\times$ height, exactly like a rectangle.
3. Substitute: 8×5 .
4. Note that the height is the **perpendicular** distance, not the slanted side.

Area = 40 cm^2

Worked Example 2

A parallelogram has an area of 54 m^2 and a base of 9 m. Find its height.

1. Start from $A = \text{base} \times \text{height}$.
2. Substitute what you know: $54 = 9 \times h$.
3. Divide both sides by 9.
4. $54 \div 9 = 6$.

The height is 6 m

Remember: Area of a parallelogram = base $\times$ height, the same as a rectangle. Use the **perpendicular** height, never the slanted side.



Question 1: Find the area of each parallelogram.

1. base 6 cm, height 3 cm

2. base 10 cm, height 4 cm

3. base 12 m, height 5 m

4. base 7 cm, height 8 cm

5. base 15 cm, height 6 cm

6. base 9 m, height 9 m

7. base 20 cm, height 3 cm

8. base 11 cm, height 7 cm



Question 2: Answer the following.

1. Area 36 cm^2 , base 6 cm. Find the height.
2. Area 84 m^2 , height 7 m. Find the base.
3. A parallelogram has base 10 cm, height 4 cm and a slanted side of 5 cm. Find its area.
4. Why is the slanted side not used in the area formula?
5. Compare the area of a parallelogram with base 8 and height 5 with a rectangle 8 by 5.
6. Find the area of a parallelogram with base 2.5 m and height 4 m.



Question 3: Answer the following questions.

1. A parallelogram-shaped tile has base 12 cm and height 7 cm. Find its area.
2. How many such tiles are needed to cover 1 680 cm²?
3. A parallelogram-shaped garden has base 9 m and height 6 m. Turf costs \$12 per square metre. Find the cost.
4. A parallelogram has area 96 cm² and height 8 cm. Find its base.
5. Explain why a rectangle is a special kind of parallelogram.





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Answers: Area of Parallelograms**Question 1**

1. 18 cm^2
2. 40 cm^2
3. 60 m^2
4. 56 cm^2
5. 90 cm^2
6. 81 m^2
7. 60 cm^2
8. 77 cm^2

Question 2

1. 6 cm
2. 12 m
3. 40 cm^2
4. The slanted side is longer than the true height, so using it would give an answer that is too large.
5. They are equal, both 40 square units.
6. 10 m^2

Question 3

1. 84 cm^2
2. 20 tiles
3. $54 \text{ m}^2 \times \$12 = \$648$
4. 12 cm
5. A rectangle has two pairs of parallel sides, which is the definition of a parallelogram. Its angles just happen to be right angles.

