

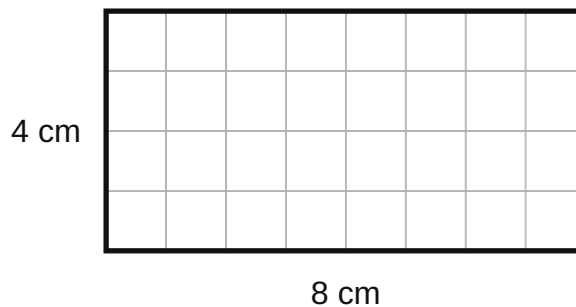
Boost Free Lessons - Year 5 Maths

Lesson 15: Area of Rectangles

Name: _____ Grade: _____ Date: _____

Worked Example 1

Find the area of a rectangle 8 cm long and 4 cm wide.



$$8 \times 4 = 32 \text{ squares}$$

1. **Area** is the amount of surface a shape covers.
2. The grid shows 4 rows with 8 squares in each row.
3. Rather than counting all of them, multiply: $8 \times 4 = 32$.
4. Each square is 1 cm by 1 cm, so the units are square centimetres.

$$\text{Area} = 32 \text{ cm}^2$$

Worked Example 2

A rectangle has an area of 45 cm^2 and a length of 9 cm. Find its width.

1. Area = length $\times$ width, so $9 \times \text{width} = 45$.
2. This time you know the area, so divide instead of multiply.
3. $45 \div 9 = 5$.
4. Check: $9 \times 5 = 45$.

$$\text{Width} = 5 \text{ cm}$$

Remember: Area = length $\times$ width, and it is measured in **square** units such as cm^2 . Perimeter is the distance around; area is the surface covered.



Question 1: Find the area of each shape.

1. Rectangle, 6 cm by 3 cm

2. Rectangle, 10 cm by 7 cm

3. Square, side 5 cm

4. Rectangle, 12 m by 4 m

5. Square, side 9 cm

6. Rectangle, 15 cm by 6 cm

7. Rectangle, 20 m by 11 m

8. Square, side 12 m



Question 2: Answer the following.

1. A rectangle has area 36 cm^2 and length 6 cm. Find its width.
2. A rectangle has area 60 m^2 and width 5 m. Find its length.
3. A square has an area of 49 cm^2 . Find one side.
4. A rectangle is 8 cm by 5 cm. Find both its area and its perimeter.
5. Which has the larger area: a 6 cm square, or a 9 cm by 4 cm rectangle?
6. Explain the difference between area and perimeter.



Question 3: Answer the following questions.

1. A room is 5 m by 4 m. How many square metres of carpet are needed?

2. Carpet costs \$45 per square metre. Using your answer above, find the total cost.

3. A rectangular garden is 12 m by 8 m. Find its area.

4. A wall 3 m by 2 m is covered with tiles measuring 1 m by 1 m. How many tiles are needed?

5. Two rectangles both have a perimeter of 20 cm. One is 6 cm by 4 cm and the other is 8 cm by 2 cm. Do they have the same area?





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Answers: Area of Rectangles**Question 1**

1. 18 cm^2
2. 70 cm^2
3. 25 cm^2
4. 48 m^2
5. 81 cm^2
6. 90 cm^2
7. 220 m^2
8. 144 m^2

Question 2

1. 6 cm
2. 12 m
3. 7 cm
4. Area 40 cm^2 , perimeter 26 cm
5. They are equal, both 36 cm^2
6. Area is the surface a shape covers, measured in square units. Perimeter is the distance around the outside, measured in single units.

Question 3

1. 20 m^2
2. \$900
3. 96 m^2
4. 6 tiles
5. No. The first has area 24 cm^2 and the second 16 cm^2 .

