

Area of Rectangles

Once you know the rule “area = length \times width,” rectangles get easy. Don’t forget to use *square units* for the answer.

Formula
Area of a rectangle = length \times width
Area of a square = side \times side

Key Concepts

1. A rectangle’s area equals length times width: $A = l \times w$.
2. A square is a rectangle where every side is the same. So $A = \text{side} \times \text{side}$.
3. Area is always measured in *square* units: square inches, square feet, square meters, etc.
4. If you know the area and one side, you can find the other side by dividing: $\text{side} = A \div \text{known side}$.

Worked Examples

① Find the area of a rectangle with length 7 in and width 4 in.

 Apply the formula: $A = l \times w = 7 \times 4 = 28$. Don’t forget the unit: 28 square inches (sq in).

 **Answer:** 28 sq in

② A square has a side of 5 cm. What is its area?

 For a square, $A = \text{side} \times \text{side} = 5 \times 5 = 25$. Unit: 25 square centimeters.

 **Answer:** 25 sq cm

③ A rectangle has area 36 sq ft and width 4 ft. What is its length?

 Use the formula backward. We know $A = l \times w$, so $l = A \div w = 36 \div 4 = 9$. Length is 9 ft.

 **Answer:** 9 ft

Practice Problems

Find the missing area or side.

1. $l = 8, w = 3 \Rightarrow A = ?$ _____

2. $l = 5, w = 5 \Rightarrow A = ?$ _____

3. $l = 9, w = 6 \Rightarrow A = ?$ _____

4. $l = 7, w = 2 \Rightarrow A = ?$ _____

5. $l = 4, w = 8 \Rightarrow A = ?$ _____

6. $l = 10, w = 3 \Rightarrow A = ?$ _____

7. $l = 6, w = 6 \Rightarrow A = ?$ _____

8. $l = 9, w = 4 \Rightarrow A = ?$ _____

9. $A = 30, w = 5 \Rightarrow l = ?$ _____

10. $A = 48, l = 8 \Rightarrow w = ?$ _____

11. $l = 7, w = 7 \Rightarrow A = ?$ _____

12. $A = 54, w = 6 \Rightarrow l = ?$ _____

Study Tips

- 👉 Always include the units. “28” could be inches, feet, or square inches — be specific.
- 👉 For a square, the side is squared (multiplied by itself). The unit becomes “square *whatever*.”
- 👉 To find a missing side from the area, *divide* (use the inverse of multiplication).

Word Problems

1. A rug is 8 ft long and 5 ft wide. What is the area of the rug?

Answer: _____

2. Marcus tapes square photos on a wall, 6 across and 4 down. Each photo is 1 in by 1 in. What is the total area covered by the photos?

Answer: _____

Answer Key — with Friendly Explanations**Practice Problems**

1. $8 \times 3 = 24$.

 **Answer:** 24

2. $5 \times 5 = 25$.

 **Answer:** 25

3. $9 \times 6 = 54$.

 **Answer:** 54

4. $7 \times 2 = 14$.

 **Answer:** 14

5. $4 \times 8 = 32$.

 **Answer:** 32

6. $10 \times 3 = 30$.

 **Answer:** 30

7. $6 \times 6 = 36$.

 **Answer:** 36

8. $9 \times 4 = 36$.

 **Answer:** 36

9. $30 \div 5 = 6$.

 **Answer:** 6

10. $48 \div 8 = 6$.

 **Answer:** 6

11. $7 \times 7 = 49$.

 **Answer:** 49

12. $54 \div 6 = 9$.

 **Answer:** 9**Word Problems**

1. $8 \times 5 = 40$ sq ft.

 **Answer:** 40 *sq ft*

2. $6 \times 4 = 24$ photos \times 1 sq in each = 24 sq in.

 **Answer:** 24 *sq in*

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