

Grade 4 · Area and Perimeter of Rectangles · Quiz

Common Core 4.MD.A.3 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

Check what you know about area and perimeter with these 10 multiple-choice questions. Each has one correct answer. Read the figures carefully, watch the units, and read each explanation to learn from a mistake.

Grade 4 Common Core: 4.MD.A.3

Questions

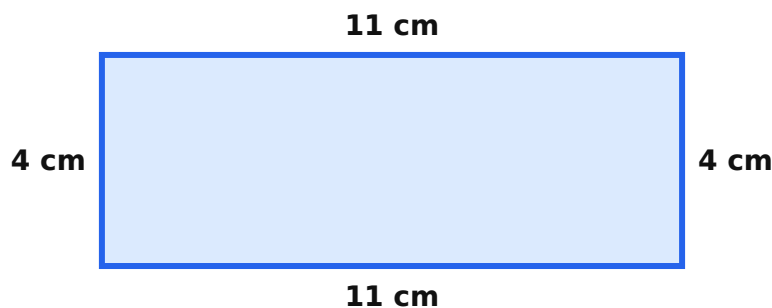
Question 1

What is the area of a rectangle that is 9 feet long and 7 feet wide?

- A. 32 sq ft
- B. 16 sq ft
- C. 36 sq ft
- D. 63 sq ft

Question 2

What is the perimeter of the rectangle?



- A. 44 cm
- B. 15 cm
- C. 30 cm
- D. 26 cm

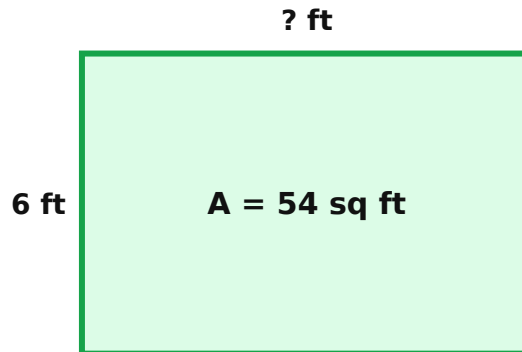
Question 3

A square has sides of 7 inches. What is its area?

- A. 28 sq in
- B. 49 sq in
- C. 14 sq in
- D. 77 sq in

Question 4

The area of this rectangle is 54 square feet. What is the length?



- A. 324 ft
- B. 9 ft
- C. 48 ft
- D. 60 ft

Question 5

A rectangle has a perimeter of 40 inches and a length of 12 inches. What is its width?

- A. 8 in
- B. 28 in
- C. 16 in
- D. 20 in

Question 6

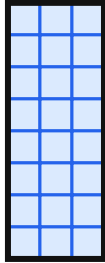
Maya's dog pen is 20 feet long and 8 feet wide. How much fence goes all the way around the pen?

- A. 160 ft
- B. 28 ft
- C. 48 ft
- D. 56 ft

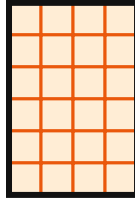
Question 7

Both rectangles have an area of 24 square units. Which has the shorter perimeter, and what is it?

A: 3 by 8



B: 4 by 6



- A. B, 20 units
- B. A, 22 units
- C. B, 24 units
- D. A, 20 units

Question 8

A rug is 6 feet by 5 feet. It costs for each square foot. What is the cost?

Question 9

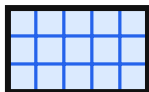
How many square tiles, 1 foot on each side, cover a floor that is 10 feet by 12 feet?

- A. 44 tiles
- B. 120 tiles
- C. 22 tiles
- D. 60 tiles

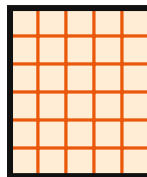
Question 10

A rectangle is 5 feet long and 3 feet wide. Its width is doubled and the length stays the same. What is the new area?

A: 5 by 3



B: 5 by 6



- A. 15 sq ft
- B. 60 sq ft
- C. 22 sq ft
- D. 30 sq ft

Answer key

1. **D** - Area is length times width: $9 \times 7 = 63$. The number 32 is the perimeter, which is a different measure.
2. **C** - Add all four sides: $11 + 4 + 11 + 4 = 30$. Multiplying gives the area, 44, and adding only three sides gives 26.
3. **B** - Area of a square is side times side: $7 \times 7 = 49$. The number 28 is the perimeter and 14 is only $7 + 7$.
4. **B** - Divide the area by the known side: $54 \div 6 = 9$. Multiplying, subtracting, or adding the numbers does not undo the area formula.
5. **A** - Half of 40 is 20, and $20 - 12 = 8$. Subtracting only one length from 40 gives 28.
6. **D** - $2 \times 20 + 2 \times 8 = 56$. The number 160 is the area, 28 is only half the perimeter, and 48 leaves out one side.
7. **A** - A: $2 \times 3 + 2 \times 8 = 22$. B: $2 \times 4 + 2 \times 6 = 20$. Same area does not mean same perimeter.
8. **C** - Area: $6 \times 5 = 30$ sq ft. Cost: $30 \times \$3 = \$90$. The price comes from using the perimeter.
9. **B** - Count the unit squares with $10 \times 12 = 120$. The number 44 is the perimeter.
10. **D** - The new width is 6 ft, so $5 \times 6 = 30$ sq ft. Doubling only one side doubles the area, not both.

Remember:

- Area of a rectangle: $A = l \times w$, in square units
- Perimeter of a rectangle: $P = 2 \times l + 2 \times w$, in plain units
- A square has area $s \times s$ and perimeter $4 \times s$
- To find a missing side from area, divide by the known side
- Rectangles with the same perimeter can have different areas