

Grade 4 - Area and Perimeter of Rectangles - Answer Key

Common Core 4.MD.A.3 · maths-pdf.fr/en/

Each solution shows the formula, the numbers put in, and the final answer in bold with the correct unit. Remember that area uses square units and perimeter uses plain units. Use the diagrams to check that your answer makes sense.

Grade 4 · Common Core State Standards: **4.MD.A.3**

Exercise 1 - Count the squares

There are 3 rows with 5 squares each: $3 \times 5 = 15$.

15 square units

Exercise 2 - Area of a rectangle

$$A = l \times w = 7 \times 3 = 21.$$

21 sq in

Exercise 3 - Perimeter by adding

$$6 + 2 + 6 + 2 = 16.$$

16 ft

Exercise 4 - Perimeter formula

$$P = 2 \times 9 + 2 \times 4 = 18 + 8 = 26.$$

26 yd

Exercise 5 - Area of a square

A square is a rectangle with equal sides: $6 \times 6 = 36$.

36 sq in

Exercise 6 - Perimeter of a square

$$4 \times 8 = 32.$$

32 ft

Exercise 7 - Find the area

$$12 \times 5 = 60.$$

60 sq ft

Exercise 8 - Find the perimeter

$$2 \times 12 + 2 \times 5 = 24 + 10 = 34.$$

34 ft

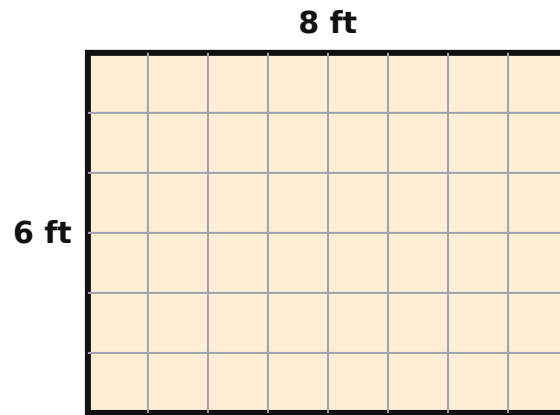
Exercise 9 - Complete the table

1. $10 \times 4 = 40$; $2 \times 10 + 2 \times 4 = 28$
2. $9 \times 6 = 54$; $2 \times 9 + 2 \times 6 = 30$
3. $11 \times 2 = 22$; $2 \times 11 + 2 \times 2 = 26$

40 sq in and 28 in; 54 sq in and 30 in; 22 sq in and 26 in

Exercise 10 - Missing width

Divide the area by the length: $48 \div 8 = 6$. Check: $8 \times 6 = 48$.



Width is 6 ft.

6 ft

Exercise 11 - Missing length

$72 \div 9 = 8$. Check: $8 \times 9 = 72$.

8 in

Exercise 12 - Missing side from perimeter

Two lengths: $2 \times 9 = 18$.

Left for two widths: $30 - 18 = 12$.

One width: $12 \div 2 = 6$.

6 in

Exercise 13 - Same area, many shapes

Pairs with product 18: 1 by 18, 2 by 9, 3 by 6.

1. $2 \times 1 + 2 \times 18 = 38$

2. $2 \times 2 + 2 \times 9 = 22$

3. $2 \times 3 + 2 \times 6 = 18$

3 by 6 has the smallest perimeter, 18 units

Exercise 14 - Doubling a rectangle

Original: $5 \times 3 = 15$ sq ft; $2 \times 5 + 2 \times 3 = 16$ ft.

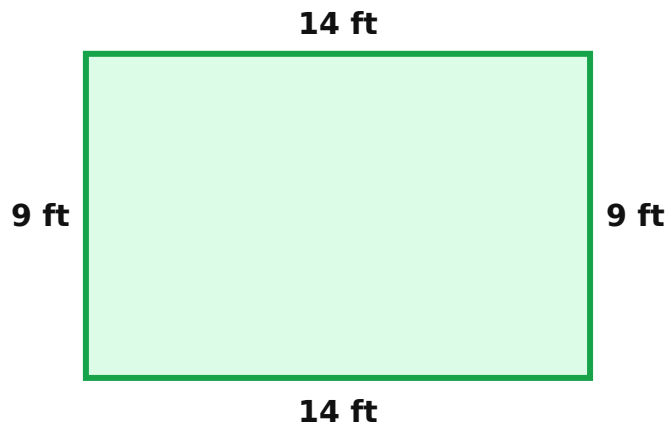
Doubled: 10 ft by 6 ft. Area $10 \times 6 = 60$ sq ft; perimeter $2 \times 10 + 2 \times 6 = 32$ ft.

15 sq ft and 16 ft; 60 sq ft and 32 ft

Exercise 15 - Garden fence

Perimeter: $2 \times 14 + 2 \times 9 = 28 + 18 = 46$ ft.

Cost: $46 \times 3 = 138$ dollars.



Walk around: $14 + 9 + 14 + 9 = 46$.

46 ft of fence; \$138

Exercise 16 - Bedroom carpet

Area: $12 \times 10 = 120$ sq ft.

Cost: $120 \times 2 = 240$ dollars.

\$240

Exercise 17 - Fence for a garden plot

Width: $96 \div 12 = 8$ ft.

Perimeter: $2 \times 12 + 2 \times 8 = 24 + 16 = 40$ ft.

40 ft

Exercise 18 - Poster board

Ribbon is around the edge: $2 \times 28 + 2 \times 22 = 56 + 44 = 100$ in.

Paper covers the front: $28 \times 22 = 616$ sq in.

100 in of ribbon; 616 sq in of paper

Exercise 19 - Patio tiles

Area: $15 \times 8 = 120$ tiles.

Boxes: $120 \div 20 = 6$.

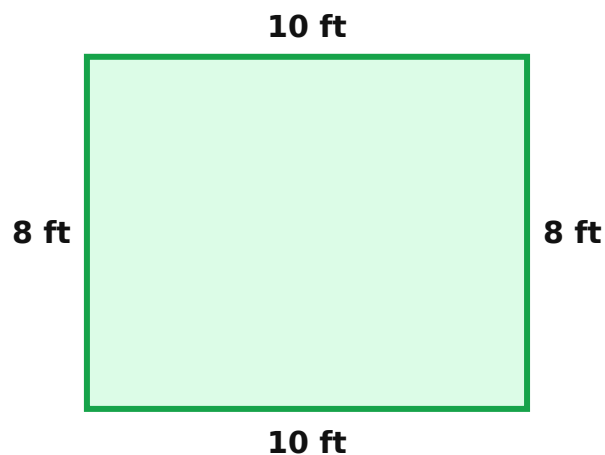
6 boxes

Exercise 20 - Dog pen

Two lengths: $2 \times 10 = 20$.

Two widths: $36 - 20 = 16$, so one width is $16 \div 2 = 8$ ft.

Area: $10 \times 8 = 80$ sq ft.



$$10 + 8 + 10 + 8 = 36.$$

Width 8 ft; area 80 sq ft