

Review: Area of Rectangles

Area is always measured in **squares of some size**. We use the superscript “2” with a unit of length to indicate the “squaring.” For example, 120 cm^2 means 120 square centimeters.

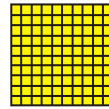
1 cm



1 cm

The area of this square is 1 square centimeter, or 1 cm^2 .

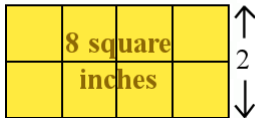
10 mm



10 mm

Each tiny square has an area of 1 square millimeter, or 1 mm^2 . The area of the whole square is $10 \text{ mm} \times 10 \text{ mm} = 100 \text{ mm}^2$.

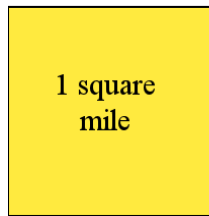
← 4 inches →



↑ 2 inches
↓

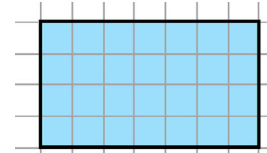
You can use multiplication to find how many square inches this rectangle covers: $2 \text{ in} \times 4 \text{ in} = 8 \text{ in}^2$.

← 1 mile →

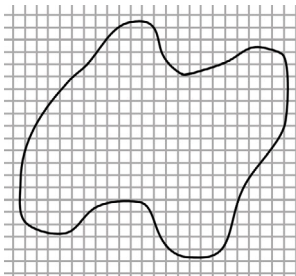


↑ 1 mile
↓

The area of this square is $1 \text{ mi} \times 1 \text{ mi} = 1 \text{ square mile}$, or 1 mi^2 .



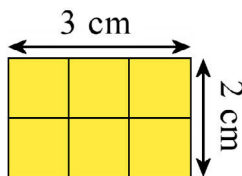
If no particular unit of length is given for the sides, we just use the word “unit” for the lengths. The area is then $7 \text{ units} \times 4 \text{ units} = 28 \text{ square units}$.



If the figure is some other shape than a rectangle, we will still use little squares to measure its area. It is just more difficult to find out how many little squares it covers, and we may have to use partial (fractional) squares as well.

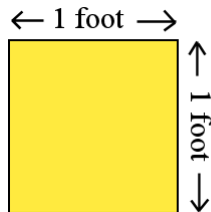
1. Write a multiplication to calculate the area of these rectangles. Include the units!

a.



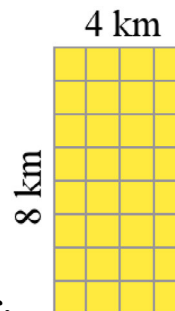
A = _____ × _____
= _____

b.



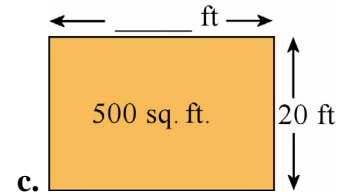
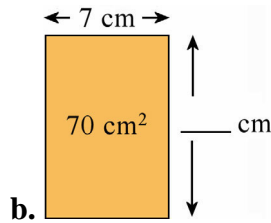
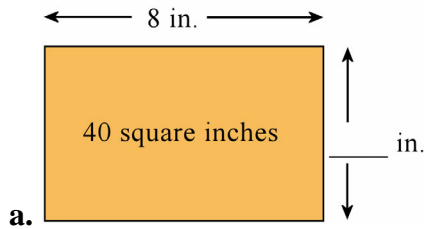
A = _____ × _____
= _____

c.

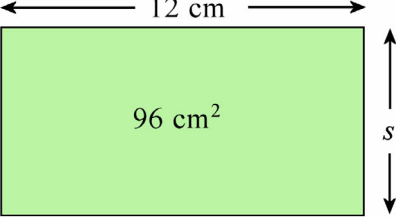
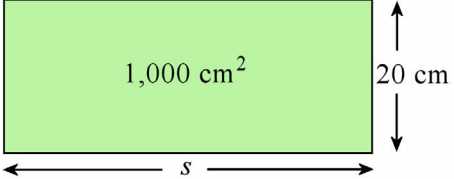


A = _____ × _____
= _____

2. Find the missing measurements.



3. Write an equation (a multiplication with an unknown) for the area. Then solve.

<p>a. </p> <p>A = _____ × _____ = _____</p> <p style="margin-left: 40px;">s = _____</p>	<p>b. </p> <p>A = _____ × _____ = _____</p> <p style="margin-left: 40px;">s = _____</p>
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4. Write an equation (a multiplication with an unknown) for the area. Then solve.

- a. The area of a rectangle is 45 m^2 , and its one side measures 9 m.
How long is the other side (s)?

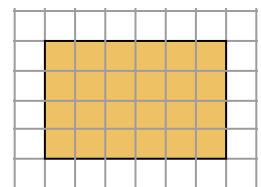
_____ × _____ = _____; $s =$ _____

- b. The area of a rectangular field is $1,800 \text{ ft}^2$, and its one side measures 60 ft.
How long is the other side (s)?

_____ × _____ = _____; $s =$ _____

5. This is a plan for a doghouse. In the grid, the side of each little square is 6 inches.

- a. What is the area of the doghouse in square inches?



- b. Figure out the lengths of sides in feet.
Then calculate the area in square feet.