

# 1.3 Square Roots of Perfect Squares

## GOAL

Use a variety of strategies to determine the square root of a perfect square.

1. Calculate.

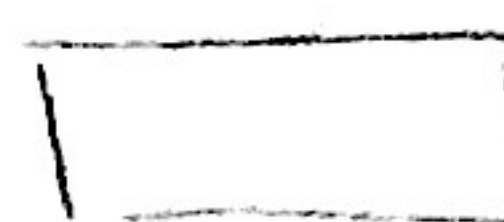
a)  $\sqrt{9} = 3$

c)  $\sqrt{196} = 14$

b)  $\sqrt{900} = 30$

d)  $\sqrt{625} = 25$

2. A bulletin board has an area of  $1296 \text{ cm}^2$ .



a) Determine three possible sets of lengths and widths for the bulletin board. Include a diagram for each set.

16 m  $\times$  81 m   48 m  $\times$  27 m   36 m  $\times$  36 m

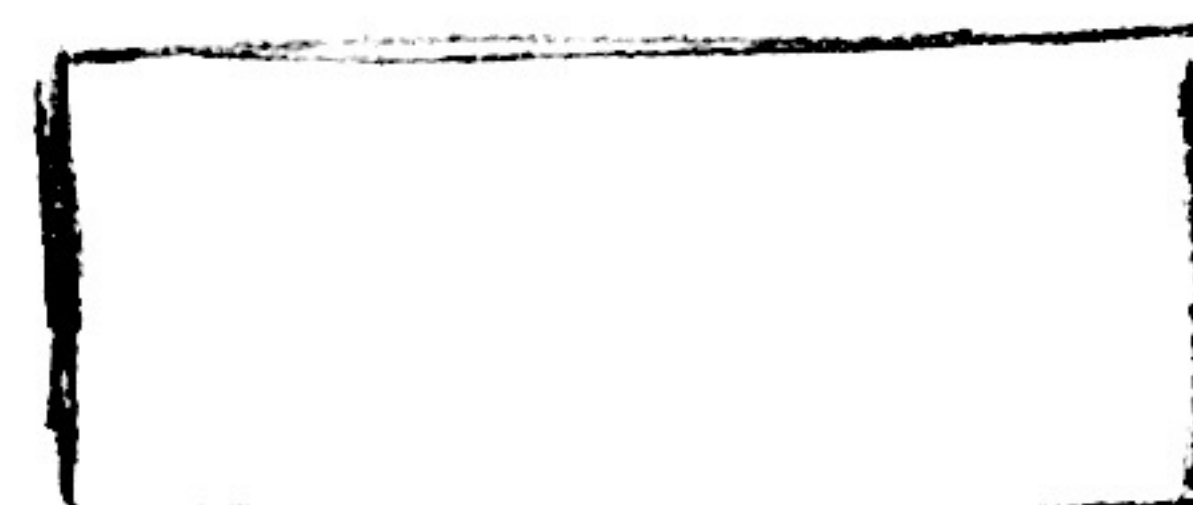
## At-Home Help

The square root of a number is one of its two identical factors.

For example, the square root of 100 is 10 since  $10 \times 10 = 100$ .

You can represent a square root using the symbol  $\sqrt{\quad}$ , under which the entire number is placed.

For example,  $\sqrt{121} = 11$ , and is read "the square root of 121 equals 11."

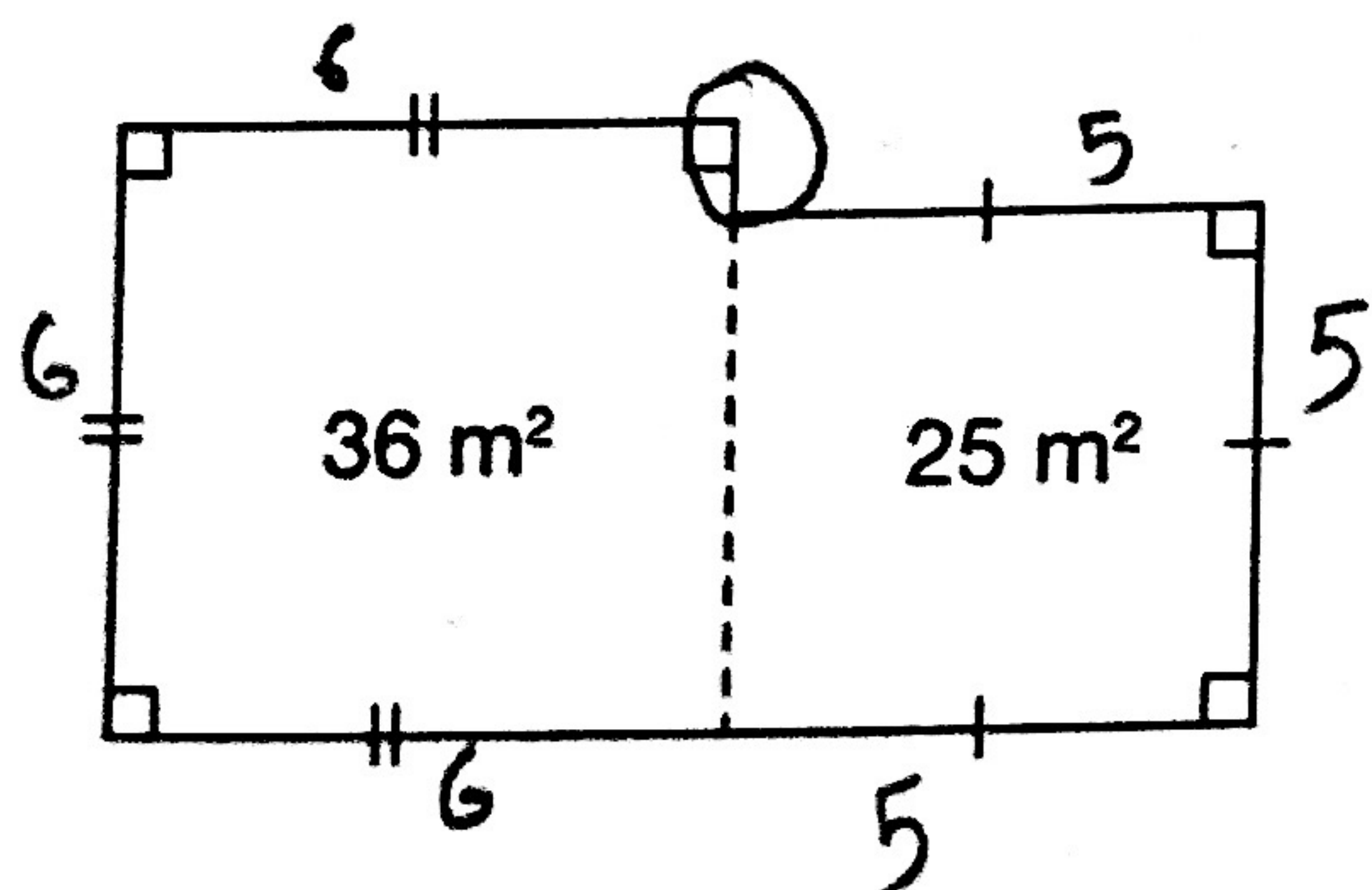


b) Which length and width forms a square? 36 m  $\times$  36 m

c) How else can you determine the possible length and width of the corkboard?

factors of 1296

3. Consider the following diagram of two rooms. What is the total perimeter of the figure?



$$\begin{aligned} &15 + 18 + 1 \\ &= 33 + 1 \\ &= 34 \text{ m} \end{aligned}$$