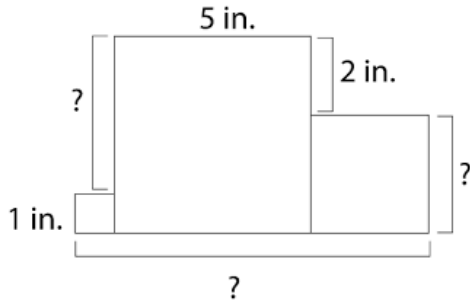


Review:

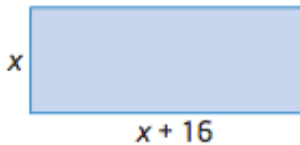
1. Find the missing sides below. All three images below are squares.



Solve the following area and perimeter problems.

2. The length of a rectangle is 3 times its width. The perimeter of the rectangle is 32 feet. What are the rectangle's length and width?

3. The length of a rectangle is 16 cm greater than its width. The area is 35 m^2 . Find the dimensions of the rectangle, to the nearest hundredth of a metre.



4. The perimeter of a rectangle is 44 inches, and its area is 120 square inches. Find the width and length of the rectangle.

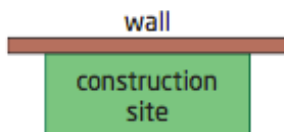
10.

A rectangular picture frame measures 8 cm by 4 cm. You want to triple the frame's area by adding the same distance x to the length and the width. Write and solve an equation to find the value of x . What are the new dimensions of the picture frame?

11.

The perimeter of a rectangle is 30 centimeters, and the area is 54 square centimeters. Find the width and length of the rectangle. [*Hint*: Let w represent the width; then $15 - w$ represents the length.]

12. A rectangular construction site is enclosed on three sides using 1200 m of fencing. The remaining side is formed by an existing wall. What dimensions enclose 180 000 m² of land?



18. A rectangular picture frame measures 20 cm by 30 cm. A new frame is to be made by increasing each side length by the same amount. The resulting enclosed area is to be 1064 cm². Find the dimensions of the new picture frame. Include a diagram in your solution.
19. A rectangular garden measures 15 m by 24 m. A larger garden is to be made by increasing each side length by the same amount. The resulting area is to be 1.5 times the original area. Find the dimensions of the new garden, to the nearest tenth of a metre. Include a diagram in your solution.

20. The length of a rectangular field is 2 m greater than three times its width. The area of the field is 1496 m^2 . What are the dimensions of the field?

21.

The sum of the areas of a square and a rectangle is 64 square centimeters. The length of the rectangle is 4 centimeters more than a side of the square, and the width of the rectangle is 2 centimeters more than a side of the square. Find the dimensions of the rectangle and the square.

22. A photograph measures 21 cm by 15 cm. A strip of constant width is to be cut from each side of the photo, so the area is reduced to 216 cm^2 . Find the width of the cut. Include a diagram in your solution.

23. A photograph measures 20 cm by 16 cm. A strip of constant width is to be cut off the top and one side of the photo, so the area is reduced to 60% of the area of the original photo. Find the width of the cut. Include a diagram in your solution.

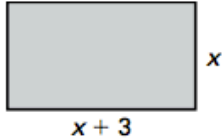
24. A rectangular field measures 15 m by 20 m. A rectangular area is to be fenced in by reducing each dimension by the same amount. The fenced-in area will be $\frac{1}{2}$ the original area. What will the dimensions of the fenced-in area be? Include a diagram in your solution.

25.

Concert Stage The dimensions of the old stage at the concert hall were 30 feet wide and 15 feet deep. The new stage has a total area of 1000 square feet. The dimensions of the new stage were created by adding the same distance x to the width and the depth of the old stage dimensions. What is the value of x ?

Find the value of x .

40. Area of the rectangle = 28



41. Area of the rectangle = 32



42. **Hopscotch** The community playground has a hopscotch pad that is 8 feet longer than it is wide. The total area of the pad is 48 square feet. What are the dimensions of the hopscotch pad?

43.

Picture Frame You are making a square frame of uniform width for a square picture that has side lengths of 2 feet. The total area of the frame is 5 square feet. What is the length of the sides of the frame?

