

## Lesson 2-4

## Example 1

**HOME IMPROVEMENT** How many square feet of carpeting are needed to cover the floor of this room?

## Solution

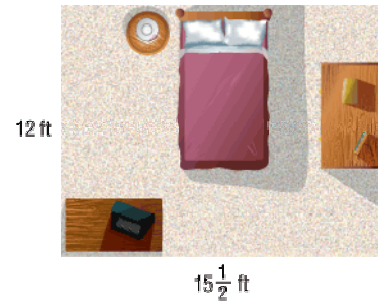
Use the formula for the area of a rectangle.

$$A = \ell \cdot w$$

$$A = 15\frac{1}{2} \text{ ft} \cdot 12 \text{ ft}$$

$$A = 186 \text{ ft}^2$$

To cover the floor of this room, 186 ft<sup>2</sup> of carpeting are needed.



## Example 2

**ART** Sara works in a framing shop. A customer brought in a picture with the dimensions shown.

What is the area of the piece of glass that Sara will need to cut to cover this picture?

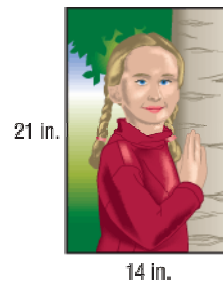
## Solution

$$A = \ell \cdot w$$

$$A = 21 \cdot 14$$

$$A = 294$$

The area of the piece of glass will be 294 in<sup>2</sup>.



**Example 3**

Find the area of the parallelogram.

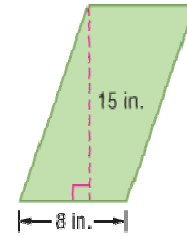
**Solution**

$$A = b \cdot h$$

$$A = 8 \cdot 15$$

$$A = 120$$

The area of the parallelogram is  $120 \text{ in}^2$ .

**Example 4**

Find the area of the triangle.

**Solution**

$$A = \frac{1}{2} \cdot b \cdot h$$

$$A = \frac{1}{2} \cdot 6.8 \cdot 2.5$$

$$A = 8.5$$

The area of the triangle is  $8.5 \text{ cm}^2$ .

