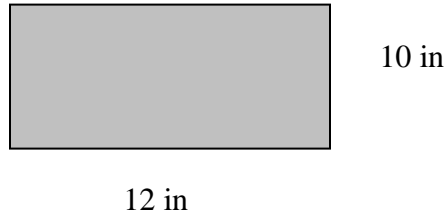
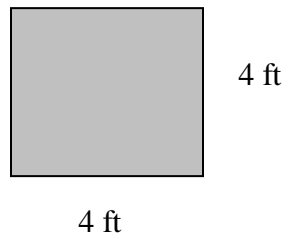


Area: Area, by definition, refers to the inside of a shape. Think about a garden.....the perimeter is the fence, the area is the garden itself. Finding the area can be as simple as multiplying two numbers. For example:



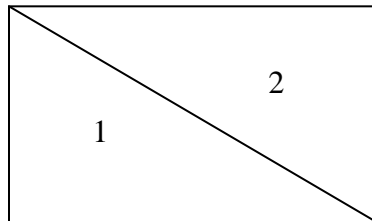
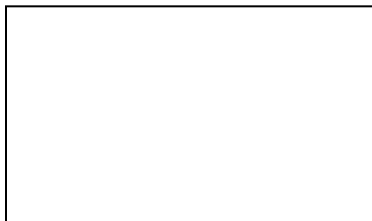
This rectangle has a length of 12 inches and a width of 10 inches. To find the area of a rectangle or square, you multiply the length x width. The area of this rectangle would be $12 \text{ in} \times 10 \text{ in} = 120 \text{ in}^2$.

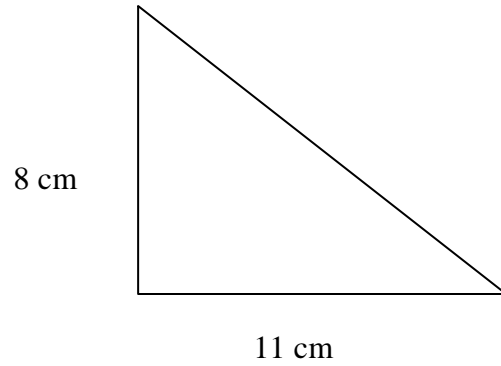


This square has an area of 16 ft^2 . (4×4)

TASK #1: Your task is to draw 3 different rectangles that all have an area of 24 cm^2 .

Area of a Triangle: Finding the area of the triangle is easy once you understand the difference between a triangle and a rectangle. Look at the two rectangles below. They are identical in size. The rectangle on the right has a diagonal line to show you that one rectangle has exactly 2 triangles. Therefore, the formula for finding the area of a triangle is $\text{length} \times \text{width} \div 2$.





This triangle has a length of 11 cm and a width of 8 cm. To find the area, you would multiply $11 \times 8 = 88$then you must divide it by 2 (because a triangle is half of a rectangle). The area of this triangle would be 44 cm^2 .

TASK #2: In this task, you must create a rectangle and a triangle that have the same area. Be sure to draw with a ruler and label all sides.

TASK #3: You are building a rectangular garden. You have exactly 36 feet of fencing material. What would the dimensions (i.e. length and width) need to be to maximize the area of your garden? (hint: consider all possible options before choosing one) Show at least 3 options you did not choose.

