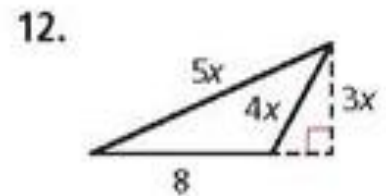
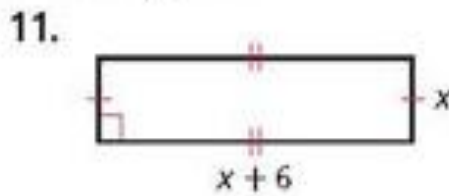
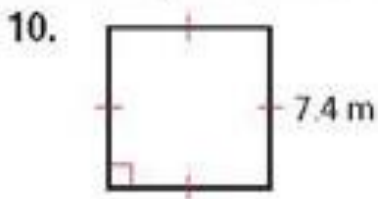
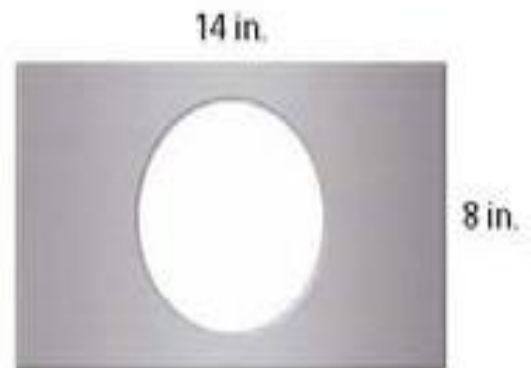


Find the perimeter and area of each figure.



## CHALLENGE AND EXTEND

1. A circle with a 6 in. diameter is stamped out of a rectangular piece of metal as shown. Find the area of the remaining piece of metal. Use the  $\pi$  key on your calculator and round to the nearest tenth.



2. a. Solve  $P = 2\ell + 2w$  for  $w$ .  
b. Use your result from part a to find the width of a rectangle that has a perimeter of 9 ft and a length of 3 ft.
3. Find all possible areas of a rectangle whose sides are natural numbers and whose perimeter is 12.
4. **Estimation** The Ahmes Papyrus dates from approximately 1650 B.C.E. Lacking a precise value for  $\pi$ , the author assumed that the area of a circle with a diameter of 9 units had the same area as a square with a side length of 8 units. By what percent did the author overestimate or underestimate the actual area of the circle?
5. **Multi-Step** The width of a painting is  $\frac{4}{5}$  the measure of the length of the painting. If the area is  $320 \text{ in}^2$ , what are the length and width of the painting?