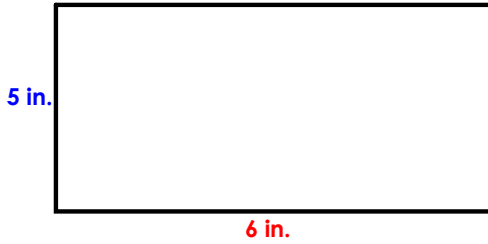


# 10.1 Area of Shapes

Objective: Students will be able to find the area squares, rectangles, and triangles.

## Area

Area is a measure of how much \_\_\_\_\_ there is in a shape

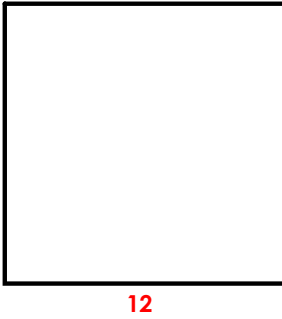


Shape: \_\_\_\_\_

$$\text{Area} = \text{Length} \times \text{Width}$$

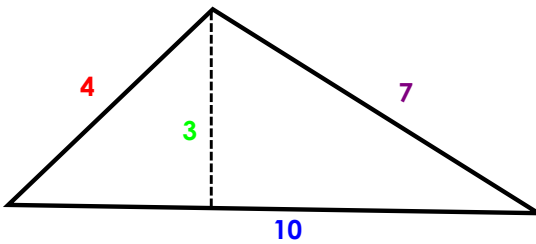
Find the area of the following shapes

Shape: \_\_\_\_\_



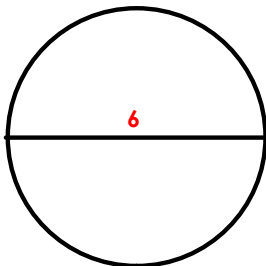
$$\text{Area} = \text{Side}^2$$

Shape: \_\_\_\_\_



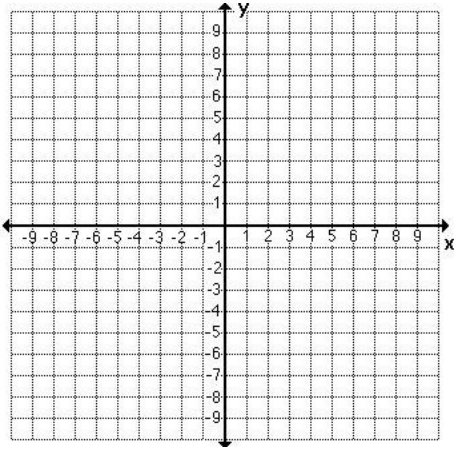
$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

Shape: \_\_\_\_\_

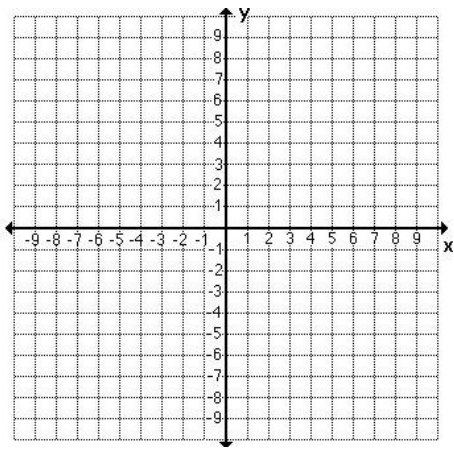


$$\text{Area} = \pi \times \text{radius}^2$$

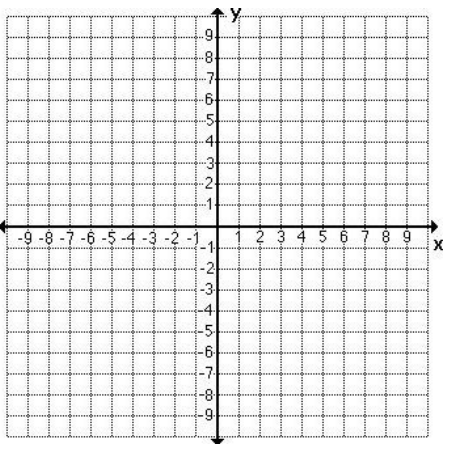
### Area on the Coordinate Plane



In rectangle CATS,  $C(-8,2)$ ,  $A(-2,2)$ ,  $T(-8,-5)$  and  $S(-2,-5)$ . Find the area of CATS.



In square ABCD, the coordinate of  $A(4,6)$  and  $B(7,10)$ . Find the area of the square.

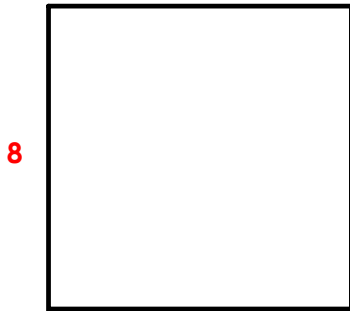


In the coordinate plane, the vertices of  $\triangle CAT$  are  $C(-1,0)$ ,  $A(2,6)$  and  $T(6,4)$ . Find the area of  $\triangle CAT$ . Round your answer to the nearest tenth.

# Independent Practice

Find the area of the following shapes

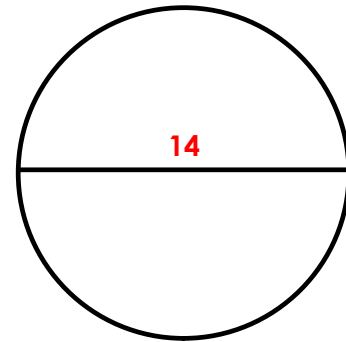
Shape: \_\_\_\_\_



Area =

Perimeter =

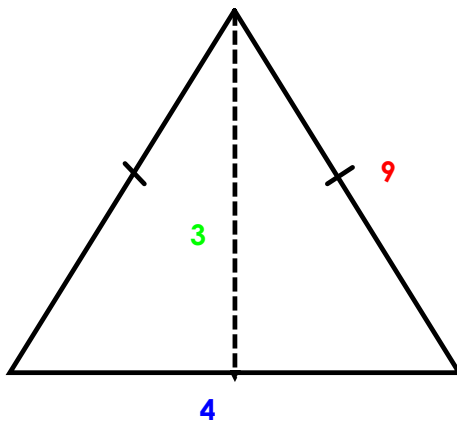
Shape: \_\_\_\_\_



Area =

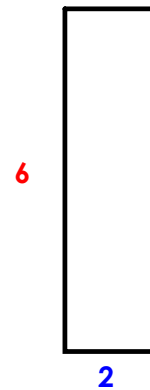
Perimeter =

Shape: \_\_\_\_\_



Area =

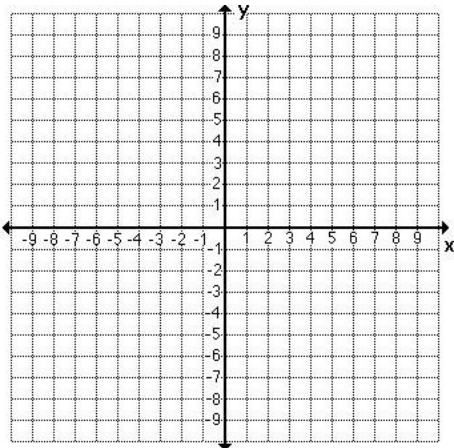
Shape: \_\_\_\_\_



Area =

The base of the Great Pyramid in Egypt is a square whose sides measure about 752 ft. Estimate the area in acres of the base of the Great Pyramid to the nearest hundredth. (Hint: 1 acre = 43,560 ft<sup>2</sup>.)

Area on the Coordinate Plane



Find the area of a circle whose diameter endpoints are located at  $A(-2,-3)$  and  $B(4,3)$ .

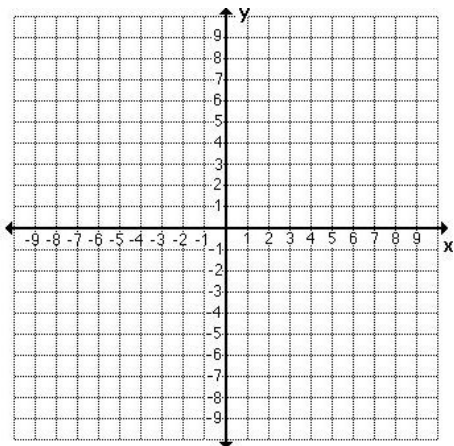
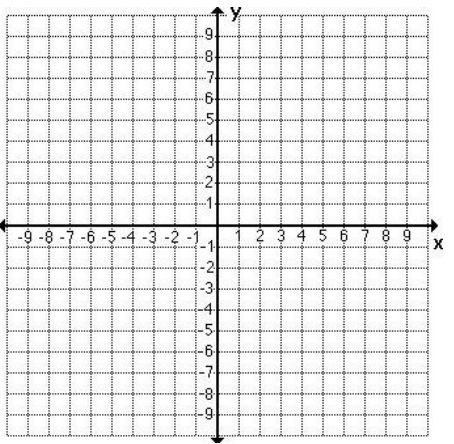
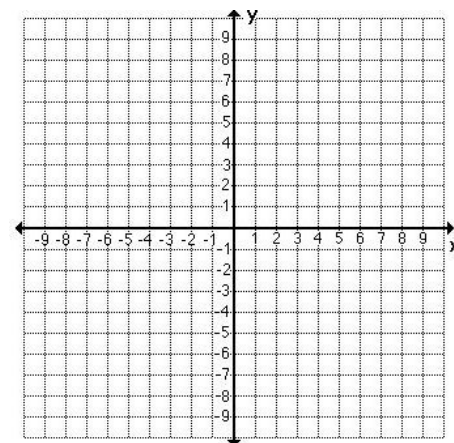


Figure  $DEFG$  has vertices  $D(-3,1)$ ,  $E(1,3)$ ,  $F(2,1)$  and  $G(-2,-1)$ . Find the area of  $DEFG$ .



Square  $MATH$  has points  $M(1,-2)$  and  $A(3,6)$ . Find the area of square  $MATH$ .



$\triangle PQR$  has coordinates  $P(1,3)$ ,  $Q(5,6)$  and  $R(4,-1)$ . Find the area of  $\triangle PQR$ .