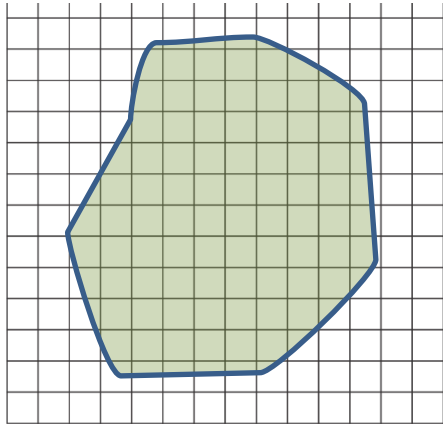
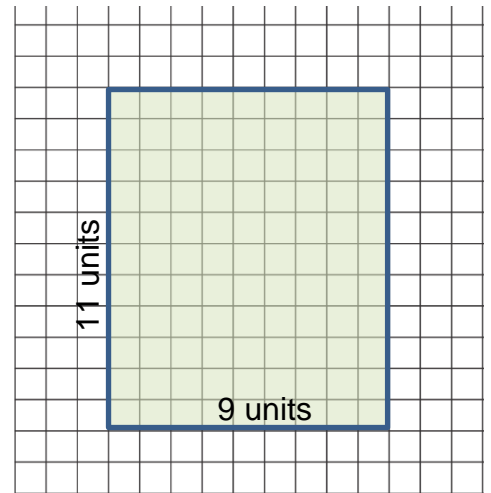


The area of the shape is the measure of part of the plane, covered with the shape.

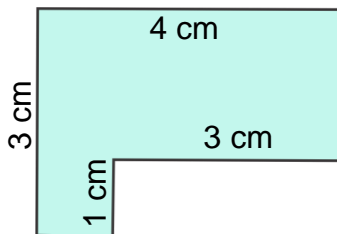


To find the area of the shape we need to find out how many area units ( $\text{cm}^2$ ,  $\text{m}^2$ ,  $\text{mm}^2$ ) are covered with the figure. We can easily calculate the area of the rectangle:

$$S_r = a \cdot b$$



Find the area of the shape (all angles are right angles):



Area of a circle.

The ratio of circumference to the diameter is defined as  $\pi$ , the irrational number which can be rounded to 3.14.

$$\frac{l}{2r} = \pi$$

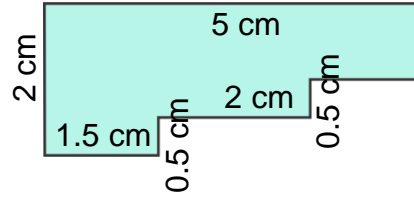
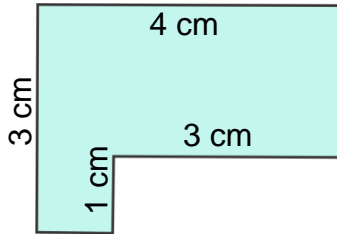
The area of the circle is

$$S = \pi r^2$$

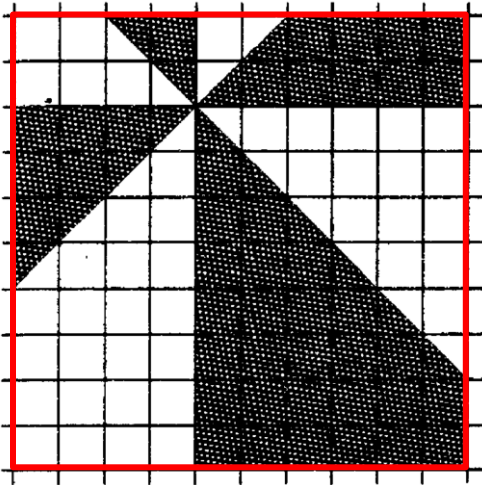
9 units

**Problems:**

1. Find the area of the shapes (all angles are right angles):



2. Which part of the square is shaded?



3. The distance between two cities is 400.4 km. At the same time a car and a bus started to move from these cities toward each other. The speed of the car is 82.5 km/h, the speed of the bus is  $\frac{11}{15}$  of the speed of the car. How far will the bus travel before it meets the car?
4. How will the area of the circle change if the radius is increased three times?
5. Fill the table:

$a$	1	-1	0.1	-0.1	$\frac{1}{2}$	$-\frac{1}{2}$
$a^2$						
$a^3$						
$a^4$						