

### Answer on Question #43844 – Math – Geometry

What is area? What is the area of a square, area of a triangle and area of a rectangle?

#### Solution:

Area is the size of a surface. In technical terms, area means the number of square units that can fit inside the object whose area you are looking to find.

Area of a square.

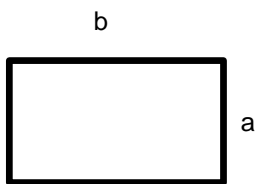
Given a square with side length  $a$ :



The formula for the area is:  $A = a^2$

Area of a rectangle.

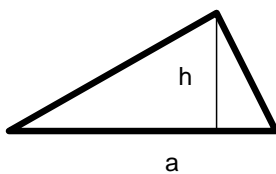
Given a rectangle with length  $b$  and width  $a$ :



The formula for the area is:  $A = ab$

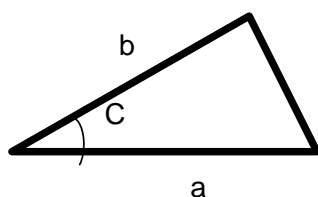
Area of a triangle.

Given a triangle with base length  $a$  and height  $h$ :



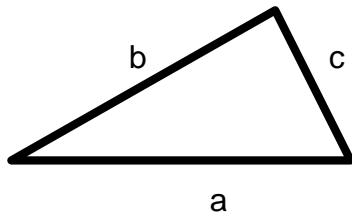
The formula for the area is:  $A = \frac{1}{2}ah$ .

Given a triangle with sides  $a, b$  and the angles  $C$ :



The formula for the area is:  $A = \frac{1}{2}ab \sin C$

Given a triangle with sides  $a, b$  and  $c$ :



The formula for the area is:  $A = \sqrt{p(p-a)(p-b)(p-c)}$

Where  $p = \frac{a+b+c}{2}$