



## Geometry Equations

### Page Menu



- Triangles
- Area
- Surface Area
- Perimeter & Circumference
- Volume
- Miscellaneous

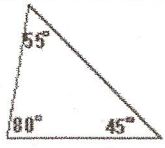
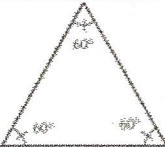
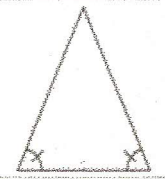

Geometry is a branch of pure mathematics that deals with the measurement, properties, and relationships of points, lines, angles, and two- and three-dimensional figures.

### Geometry Facts

- The sum of the interior angles of a triangle are equal to  $180^\circ$
- The sum of the interior angles of a quadrilateral are equal to  $360^\circ$
- The *sine* of the angle is the ratio of the length of the side opposite the angle to the length of the hypotenuse.
- The *cosine* of the angle is the ratio of the length of the side adjacent to the angle to the length of the hypotenuse.
- The *tangent* of the angle is the ratio of the length of the side opposite the angle to the length of side adjacent to the angle.
- The *cotangent* of the angle is the ratio of the length of the side adjacent to the angle to the length of the side opposite the angle.
- The *secant* of the angle is the ratio of the length of the hypotenuse to the length of the side adjacent to the angle
- The *cosecant* of the angle is the ratio of the length of the hypotenuse to the length of the opposite side






## Triangles

	Name	Description
	Right Angled	A Right Angled triangle has one $90^\circ$ angle.
	Obtuse	An Obtuse triangle has one angle that is greater than $90^\circ$ .

	Acute	An Acute triangle has all three angles less than 90°.
	Equilateral	An Equilateral triangle has all three sides the same length. All internal angles will be 60°.
	Isosceles	An Isosceles triangle has two sides with the same length.
	Scalene	A Scalene triangle has all three sides different lengths.

[back to top](#)

## Area

	Shape	Summary	Explanation
	Square	$X^2$	Multiply the base measurement by itself
	Rectangle	$X*Y$	Base multiplied by height
	Parallelogram	$X*Y$	Base multiplied by height
	Trapezoid	$\frac{1}{2}(A+B)*Y$	Add the lengths of the two parallel sides (A+B) Divide this by two Multiply by the distance between the 2 parallel sides (height Y)
	Triangle	$\frac{1}{2}B*H$	Half the Base length multiplied by the height. NB: To calculate the area of a triangle where the height is unknown see Heron's Formula below



**The Happy/Fun Math Tutor**

2901 Clint Moore Road #319

Boca Raton, FL 33496 USA

(561) 459-2058

HappyFunMathTutor@gmail.com

