THE UNIT CIRCLE



The Unit Circle is one method of finding the exact values for the primary trigonometric functions (without using a calculator or rounding off). If the radius of the circle is 1 unit, the hypotenuse of each right angled triangle formed by moving through the angles 30, 45, 60 and 90o is 1. Starting on the x-axis, the cos and sin of all of the angles shown are written as coordinates of the point formed by going over x units and up y units. The cos is the x coordinate and the sin is the y coordinate. Find Tangent by dividing sin by cos.

The values in the other 3 quadrants are identical to those in the first quadrant but some will be negative depending on the CAST rule (All positive in Quad 1, Sine positive in Quad 2, Tangent positive in Quad 3, and Cosine positive in Quad 4).