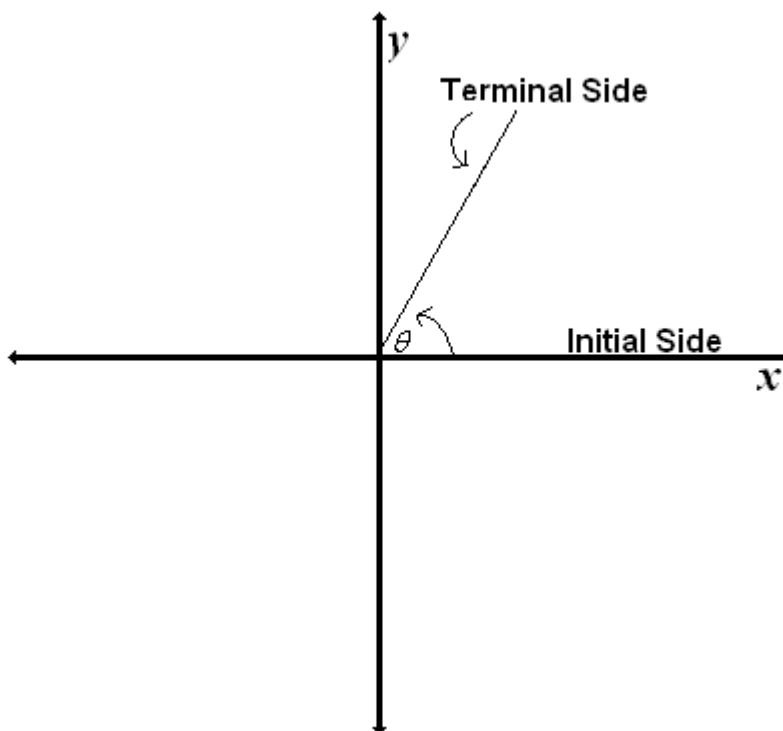


Angles

In trigonometry, we study angles and triangles. Before discussing angles, however, there are a few vocabulary terms that will be necessary. Each angle has an initial side and a terminal side. It will help to think of an angle in the following manner.

Begin by picturing a standard Cartesian Plane with two rays resting on the positive side of the x axis. As one of the sides moves in a counterclockwise direction, the other stays put. As the ray moves, an angle is being created at their vertex. The line segment that remains on the positive side of the x axis is called the Initial Side of the angle. The line segment that is moving is known as the Terminal Side of the angle.



Notice the symbol used in the picture above. That symbol (θ) is the Greek letter theta. In trigonometry, Greek letters are often used to represent angles.

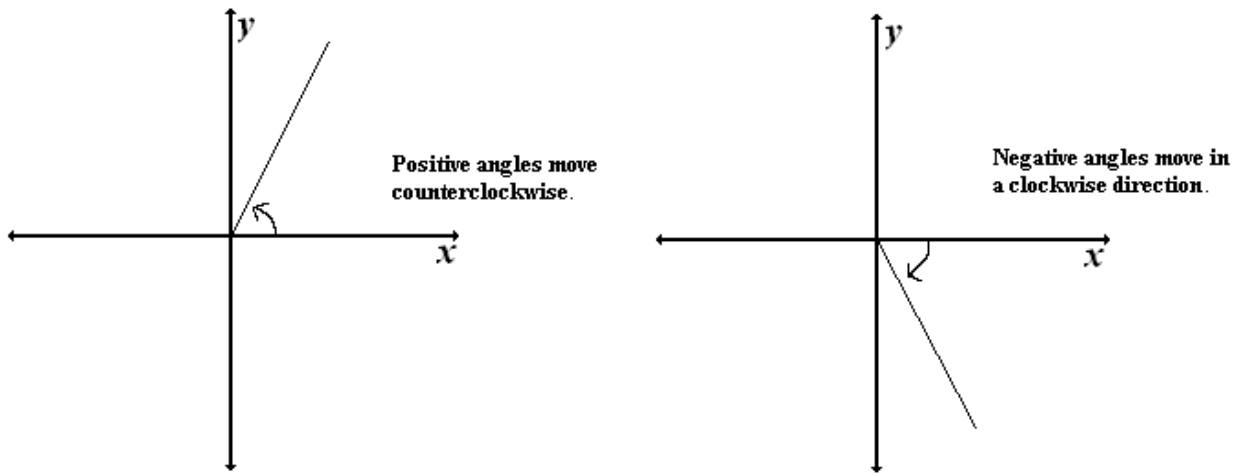
There are also some basic geometric terms that will be used in the study of trigonometry.

Recall that an Acute Angle is an angle that is less than 90 degrees, while an Obtuse Angle is an angle whose measure is between 90 and 180 degrees.

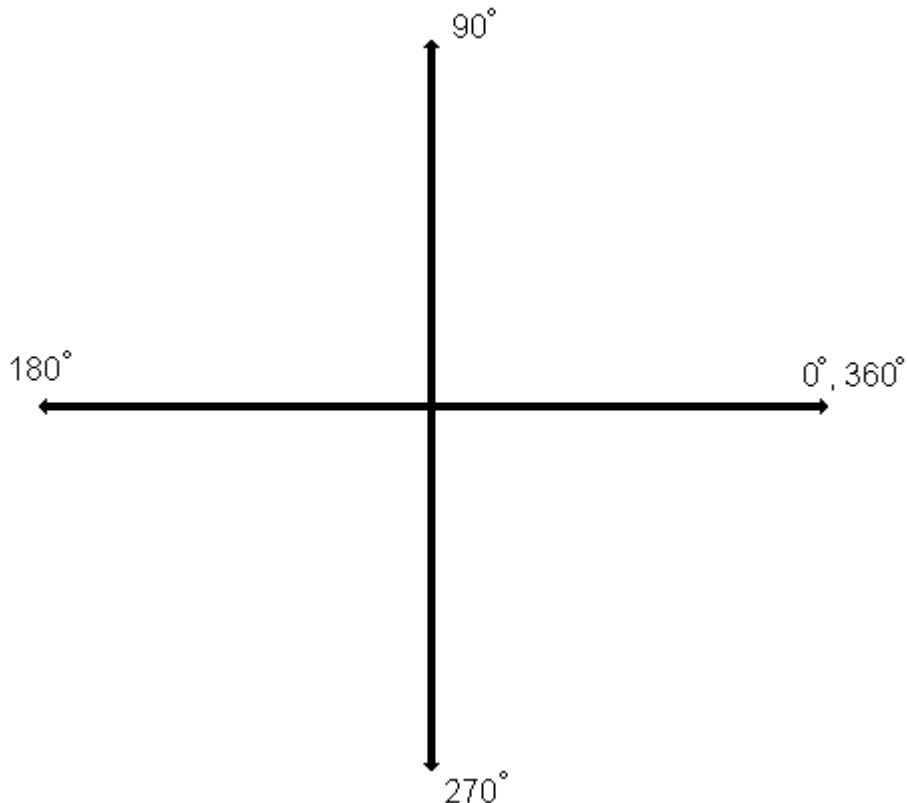
Supplementary Angles are two angles whose sum is 180 degree. ComplimentaryAngles are angles whose sum is 90 degrees.

In trigonometry, a plane is divided into four quadrants.

An angle whose initial side is on the positive side of the x axis is said to be in Standard Position. An angle is positive if the terminal side is moving in a counterclockwise direction. An angle is negative if the terminal side is moving in a clockwise direction.



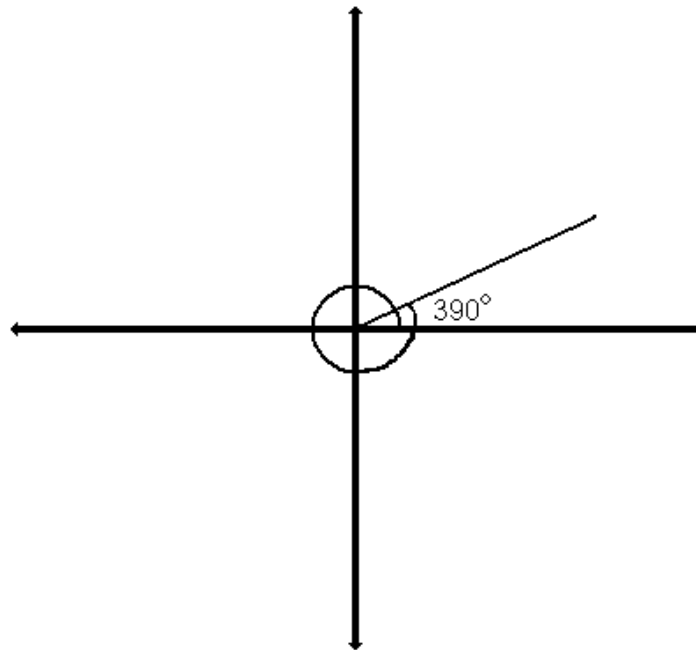
In trigonometry, a plane is divided into four quadrants.



According to the diagram above, the terminal side of a 20° angle would reside in quadrant I. However, an angle that measures 380° would also share the same terminal side. The only difference being, the terminal side of the 380° angle makes a complete revolution before finally coming to a stop.

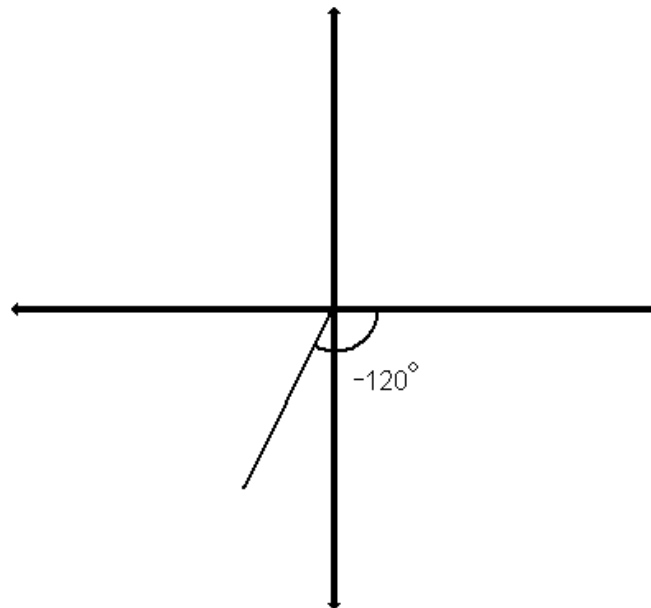
Here are a couple of examples of how to give a graphical representation of an angle.

Give a graphical representation of an angle that measures 390° .



In the above example, a 390° angle moves in a counterclockwise direction, and makes one complete revolution where the terminal side ends up in quadrant I.

Give a graphical representation of an angle that measures -120° .



In the above example, a -120° moves in a clockwise direction, and the terminal side resides in quadrant III.