

**How to succeed in Trigonometry**

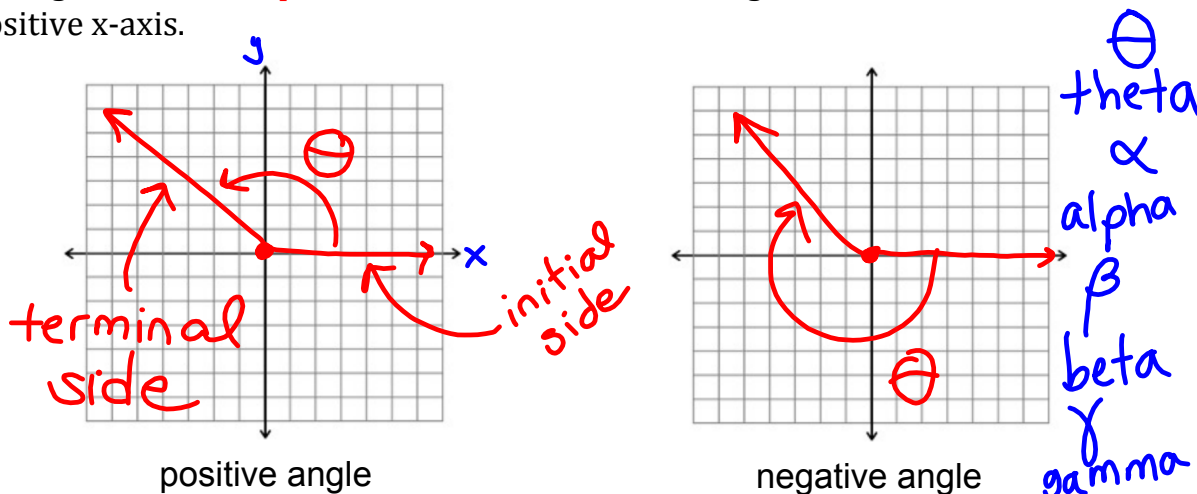
- come to class on time every day
- pay attention and take notes in class
- **ask questions** about lecture in class, after class, during Office Hours, and in the Math Lab
- **do your homework** as soon as it is assigned
- if you have trouble with your homework, make sure you understand what the question is asking by looking up definitions and examples in your notes and textbook
- ask questions about homework questions you have trouble with in Math Lab
- if you still have questions after going to Math Lab, come to my Office Hours
- **make a habit of attending Office Hours and Math Lab** to work on homework even when you don't think you need help, so that someone is on hand to help if you need it
- don't wait until the night before a quiz or test to study
- learn your definitions
- **memorize your formulas**

5.1 Angles and Arcs

An angle is formed by rotating a given ray about its endpoint to some terminal position. The original ray is the initial side of the angle, and the second ray is the terminal side of the angle. The common endpoint is the vertex of the angle.

Angles formed by a counterclockwise rotation are considered positive angles, and angles formed by a clockwise rotation are considered negative angles.

An angle in standard position has its vertex at the origin and initial side on the positive x-axis.



One degree is the measure of an angle formed by rotating a ray  $1/360$  of a complete revolution. The symbol for degree is  $^\circ$ .

$180^\circ$  angles are straight angles.

$90^\circ$  angles are right angles.

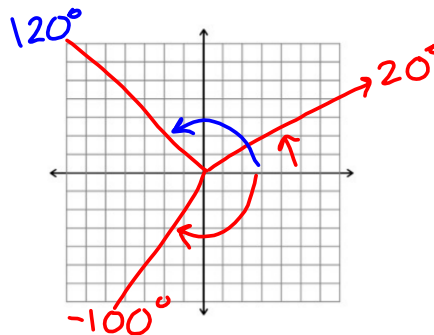
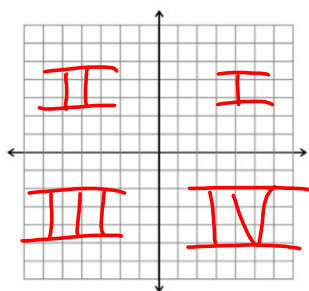
angles that have a measure greater than  $0^\circ$  but less than  $90^\circ$  are acute angles.

angles that have a measure greater than  $90^\circ$  but less than  $180^\circ$  are obtuse angles.

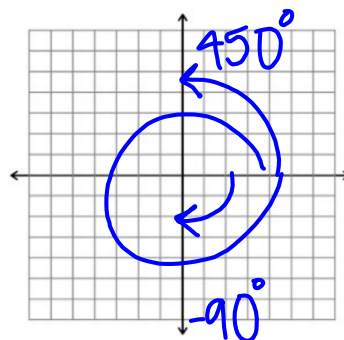
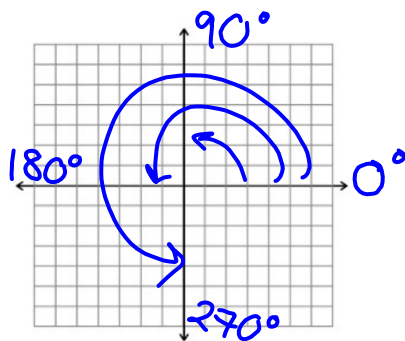
Two positive angles are complementary angles if the sum of the measures of the angles is  $90^\circ$ . Each angle is the *complement* of the other angle.

Two positive angles are supplementary angles if the sum of the measures of the angles is  $180^\circ$ . Each angle is the *supplement* of the other angle.

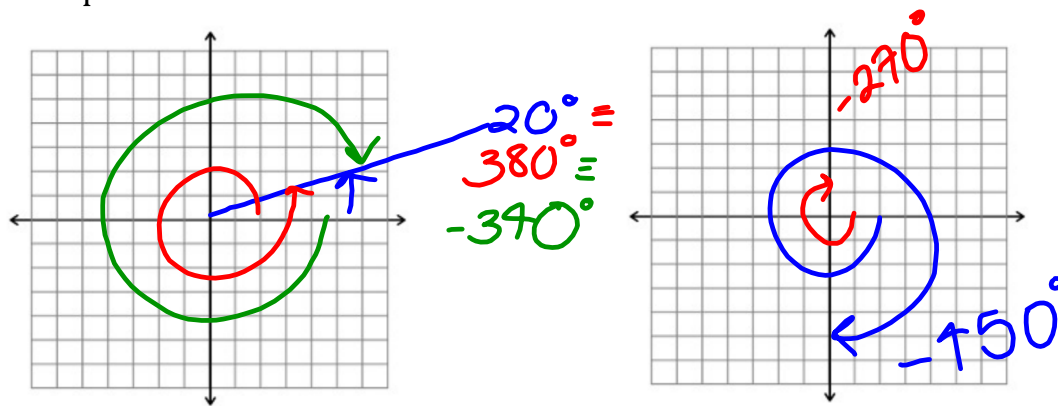
The coordinate plane is divided into four quadrants.



An angle whose terminal side falls on an axis is called a quadrantal angle.



Two angles sharing a terminal side are called coterminal and differ by integer multiples of  $360^\circ$ .



Find two positive and two negative angles that are coterminal with  $89^\circ$ .

$$89^\circ + 360^\circ = \boxed{\phantom{000}} + 360^\circ = \boxed{\phantom{000}}$$

$$89^\circ - 360^\circ = \boxed{\phantom{000}} - 360^\circ = \boxed{\phantom{000}}$$

Homework:

5.1 #1, 2, 7-18 all, 31-~~62~~<sup>51</sup> all