**CHAPTER 6 – TRIGONOMETRY**

**6.1 Angles in Standard Position**

***Standard Position*** is on a coordinate grid. It is the position of an angle with its initial arm on the positive x axis and its vertex at the origin.

Counter-clockwise rotation represents a positive angle.

The measure of the angle is

You can find any angle if you know the coordinates of a point on the terminal arm.

 -Point P(x, y) on terminal arm

 -make a right triangle with x axis

 sin$θ$ = cos$θ$ = tan$θ$ =

 \*NOTE: r2 = x2 + y2

ex.1. Point (3, 5) on the terminal arm of an angle in standard position.

a) Find r

b)

c) Find the measure of the angle to the nearest degree

ex.2. Given cos$ θ= \frac{3}{5}$ and $θ$ is in quadrant 1, what are sin $θ$ and tan $θ$?

Trigonometry is used in navigation. A direction is described by relating it to two compass points N,S,E,W

eg. W30oS

ex.3. Smoke is spotted E40oN from a ranger station, about 30km away. The firefighters must travel E and then N to get to the fire. How far do they travel in each direction? Round to the nearest km.

**Homework p431 #3-5,8,10**