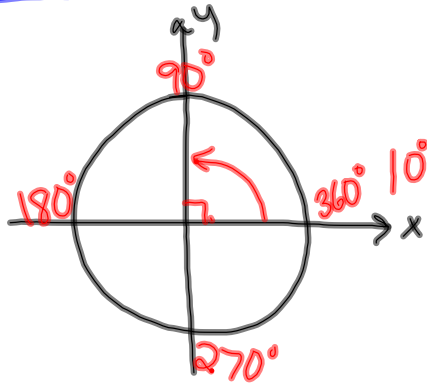
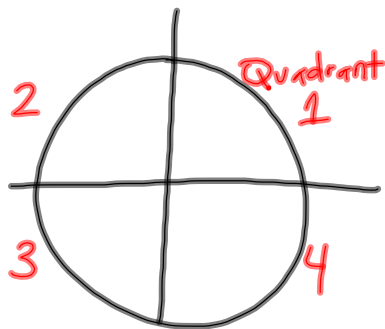


# Unit One: Trigonometry (Chp. 2)

## 2.1: Angles in standard position

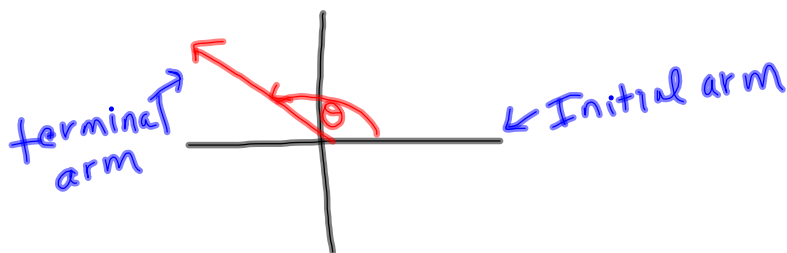


The unit circle is divided into 4 Quadrants.



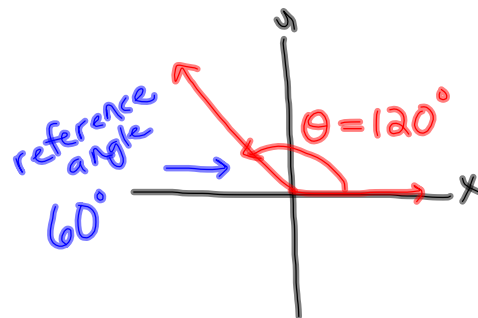
- Quadrant 1:  $0^\circ \leq \theta \leq 90^\circ$
- Quadrant 2:  $90^\circ < \theta \leq 180^\circ$
- Quadrant 3:  $180^\circ < \theta \leq 270^\circ$
- Quadrant 4:  $270^\circ < \theta \leq 360^\circ$

## Angles in standard position



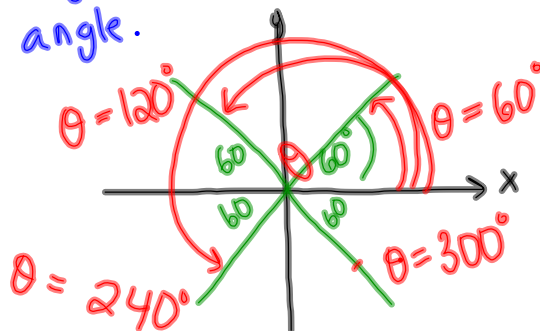
## Reference Angles

An acute angle whose vertex is at the origin and whose arms are the terminal arm and the x-axis



\* Do not use the y-axis!

By using the reference angle and 4 Quadrants, we can get four angles that have the same reference angle.



### Practice:

List the four quadrant angles for each reference angle.

1.  $45^\circ \Rightarrow 45^\circ, 135^\circ, 225^\circ, 315^\circ$
2.  $30^\circ \Rightarrow 30^\circ, 150^\circ, 210^\circ, 330^\circ$
3.  $80^\circ \Rightarrow 80^\circ, 100^\circ, 260^\circ, 280^\circ$
4.  $17.5^\circ \Rightarrow 17.5^\circ, 162.5^\circ, 197.5^\circ, 342.5^\circ$