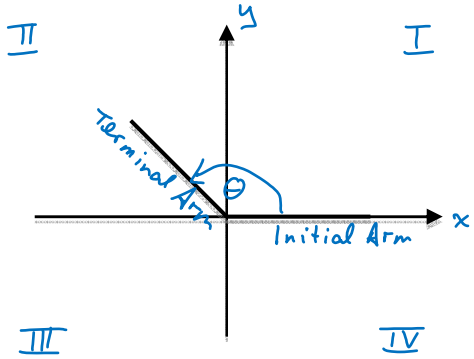
PreCalculus 11 Name_____
Date_____

1. Angles in Standard Position

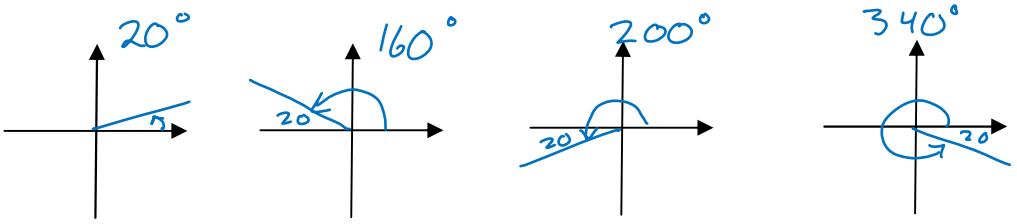
In *standard position*, the angle is based upon the origin of the Cartesian plane, with the initial arm lying on the positive x-axis, and the terminal arm in any of the 4 quadrants.

e.g.



• The reference angle is the positive angle between the Terminal arm & the x-axis, and is always between 0° & 90°.

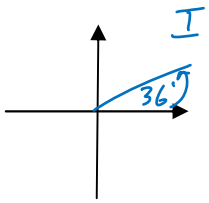
e.g. four angles with reference angles of 20° are:



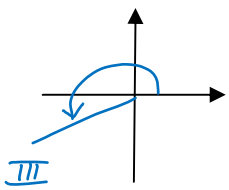
Example 1: p.79

Sketch each angle in standard position, and give the quadrants in which they lie:

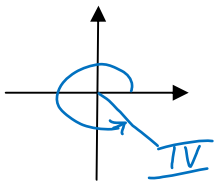
a) 36°



b) 210°



c) 315°



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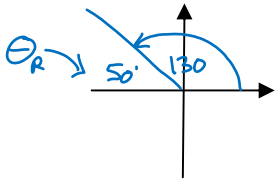
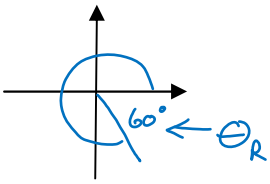
Example 2: p.80

Determine the reference angle Θ_R for each angle Θ. Sketch Θ in standard position and label the reference angle Θ_R.

a) 130^o

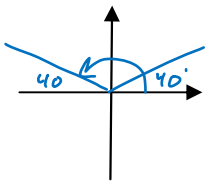


b) 300^o



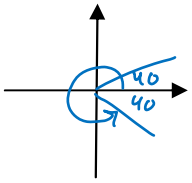
Example 3: p.81 Determine the angle in standard position when 40^o is reflected:

a) in the y-axis



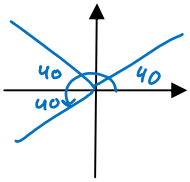
$\Theta = 140°$

b) in the x-axis



320°

c) in the y-axis and then x-axis



220°

Assignment: p.81 #1-6, 9, 10, 14