§1.1: Angular Measure & the Unit Circle

1.] Determine the quadrant in which each angle lies:

a.) $\frac{\pi}{4}$ *b.)* $-\frac{5\pi}{4}$ *c.)* $-\frac{\pi}{6}$ *d.)* $\frac{11\pi}{9}$

2.] Determine two coterminal angles (one positive and one negative) for each angle below:

a.) $\frac{\pi}{6}$ *b.)* $\frac{8\pi}{3}$

3.] Find (if possible) the complement and supplement of each angle below:

a.) $\frac{\pi}{6}$ *b.)* $\frac{\pi}{4}$

4.] Convert the following degree measures to radians:

a.) 120° *b.)* -20°

5.] Convert the following radian measures to degrees:

a.) $\frac{3\pi}{2}$ *b.)* $-\frac{7\pi}{6}$

6.] Convert each angle measure in degrees, minutes, and seconds to decimal degree form:

a.) $113^\circ\, 20'\, 14''$ *b.*) $-78^\circ\, 45'\, 18''$

7.] Find the length of the arc on a circle of radius $r = 15$ inches intercepted by an angle of $\theta = 120^\circ$.

8.] Determine the positive angle that corresponds to each point on the unit circle below, and find the cosine and sine of that angle.