## Precalculus Notes

**Example 1:** Find the values of the six trigonometric functions of  $\theta$  with the given constraint.

a.  $\sin \theta = -\frac{5}{13}$  and  $\tan \theta > 0$ 

b.  $\sec \theta = 2$  and  $\operatorname{and} \cot < 0$ 

**Example 2**: Evaluate each trigonometric function **without** the use of a calculator.

a.  $\sin \frac{5\pi}{3}$ 

b. cos(-60°)

c.  $tan \frac{11\pi}{6}$ 

**Example 3:** Find the indicated trigonometric value in the specified quadrant.

a. Find sin  $\theta\,$  given that  $\cot\theta=\,-3\,$  and  $\theta$  lies in quadrant II.

b. Find  $\tan \theta$  given that  $\sec \theta = -\frac{9}{4}$  and  $\theta$  lies in quadrant III.

**Example 4**: Find two solutions of the equation. Give your answers in degrees and in radians (the angle should not exceed one full revolution).

a. 
$$\sin \theta = -\frac{\sqrt{2}}{2}$$

b.  $\cos \theta = \frac{1}{2}$