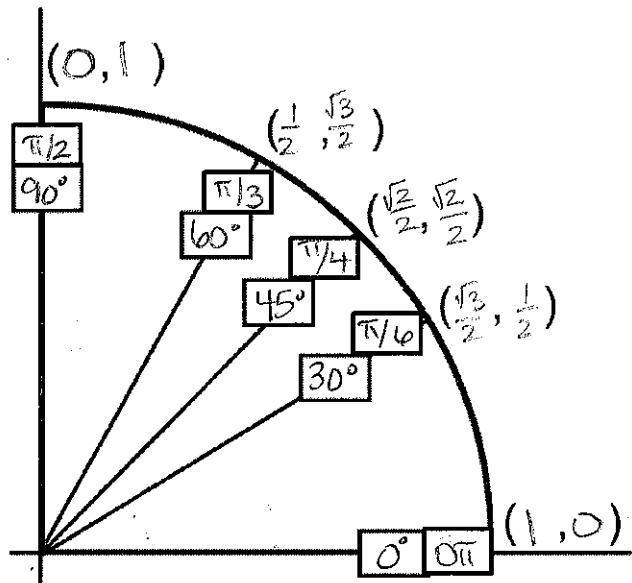


I. Complete quadrant I of the unit circle ...  
... using NO notes, resources, or calculator!!

- label degrees
- label radians
- label ordered pairs

(C, S)  
(x, y)



II. Find each exact trig value. No Calculator!!

1.  $\sin 30^\circ = \frac{1}{2}$

2.  $\cos 45^\circ = \frac{\sqrt{2}}{2}$

3.  $\tan \frac{\pi}{3} = \frac{\sqrt{3}/2}{1/2} = \frac{\sqrt{3}}{2} \cdot \frac{2}{1} = \sqrt{3}$

4.  $\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}$

5.  $\sin 60^\circ = \frac{\sqrt{3}}{2}$

6.  $\tan \frac{\pi}{6} = \frac{1/2}{\sqrt{3}/2} = \frac{1}{2} \cdot \frac{2}{\sqrt{3}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

7.  $\cot \frac{\pi}{4} = \frac{\sqrt{2}/2}{\sqrt{2}/2} = 1$

8.  $\sec 30^\circ = \frac{1}{\cos 30^\circ} = \frac{1}{\sqrt{3}/2} = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

9.  $\tan \frac{\pi}{2}$  is undefined

10.  $\sin 90^\circ = 1$

11.  $\csc 60^\circ = \frac{1}{\sin 60^\circ} = \frac{1}{\sqrt{3}/2} = \frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

12.  $\sec \frac{\pi}{4} = \frac{1}{\cos \frac{\pi}{4}} = \frac{1}{\sqrt{2}/2} = \frac{2}{\sqrt{2}} = \frac{2\sqrt{2}}{2} = \sqrt{2}$

III. Evaluate. No calculator!!

13.  $\sin 30^\circ - \cos \frac{\pi}{3} = \frac{1}{2} - \frac{1}{2} = 0$

14.  $\sin \frac{\pi}{4} \cos \frac{\pi}{4} = \frac{\sqrt{2}}{2} \cdot \frac{\sqrt{2}}{2} = \frac{2}{4} = \frac{1}{2}$

15.  $\tan 45^\circ + \cos 0^\circ = \frac{\sqrt{2}/2}{\sqrt{2}/2} + 1 = 1 + 1 = 2$