Additional Problem Assignment 2

1. Express the following (which are expressed in radians) in degrees:
   (a) $\frac{\pi}{4}$
   (b) $\frac{5\pi}{6}$
   (c) $\frac{1}{4}$

2. Find, to four decimal places, the values of the six trigometric functions of each of the following angles:
   (a) $21^\circ 18'$
   (b) $35.78^\circ$
   (c) $11.17^\circ$
   (d) $\frac{2}{3}$ (remember if there is nothing afterwards it is assumed to be radians).
   (e) $\frac{2\pi}{3}$

3. Find an acute angle $\theta$ such that:
   (a) $\sin(\theta) = 0.7894$
   (b) $\cos(\theta) = 0.7894$
   (c) $\tan(\theta) = 1.7294$

4. The sun about $1.5 \times 10^8$ km from the earth. If the angle subtended by the diameter of the sun of the surface of the earth is $9.3 \times 10^{-3}$ radians, approximately what is the diameter of the sun?

5. Find the base and altitude of an isosceles triangle whose vertical angle (the one that is not equal) is $65^\circ$ and whose equal sides are 415 cm.

6. The base of an isosceles triangle is 15.90 in. and the base angles are $54.24^\circ$. Find the equal sides and the altitude.