

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) $\frac{1}{4}$

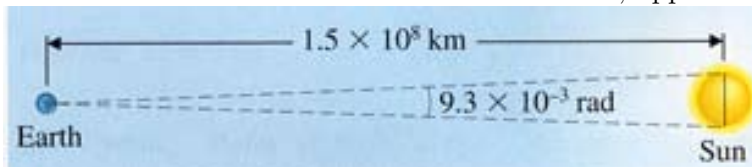
2. Find, to four decimal places, the values of the six trigonometric functions of each of the following angles:

- (a) $21^\circ 18'$
- (b) 35.78°
- (c) 11.17°
- (d) $\frac{2}{9}$ (remember if there is nothing afterwards it is assumed to be radians).
- (e) $\frac{2\pi}{9}$

3. Find an acute angle θ such that:

- (a) $\sin(\theta) = 0.7894$
- (b) $\cos(\theta) = 0.7894$
- (c) $\tan(\theta) = 1.7294$

4. The sun about 1.5×10^8 km from the earth. If the angle subtended by the diameter of the sun of the surface of the earth is 9.3×10^{-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° and whose equal sides are 415cm.
6. The base of an isosceles triangle is 15.90 in. and the base angles are 54.24° . Find the equal sides and the altitude.