

## 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)  $\frac{1}{4}$

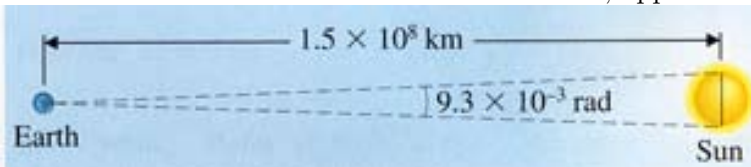
2. Find, to four decimal places, the values of the six trigonometric functions of each of the following angles:

- (a)  $21^{\circ}18'$
- (b)  $35.78^{\circ}$
- (c)  $11.17^{\circ}$
- (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  $\theta$  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 415cm.
- 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.