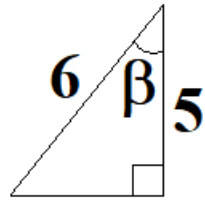


- (1) Find the **exact values** of the trigonometric functions for the acute angle β , where the given right triangle has these sides.



$$\sin(\theta) = \underline{\hspace{2cm}}$$

$$\csc(\theta) = \underline{\hspace{2cm}}$$

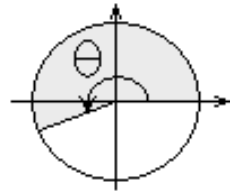
$$\cos(\theta) = \underline{\hspace{2cm}}$$

$$\sec(\theta) = \underline{\hspace{2cm}}$$

$$\tan(\theta) = \underline{\hspace{2cm}}$$

$$\cot(\theta) = \underline{\hspace{2cm}}$$

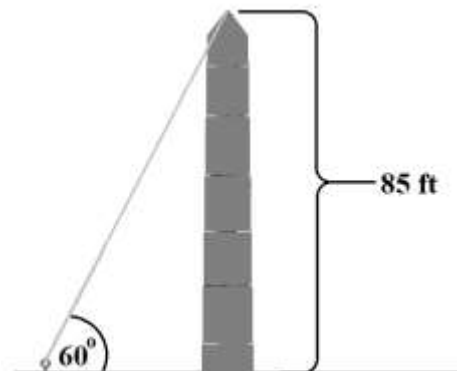
- (2) What is the **area of the circular sector** of a circle having a radius of 12 ins. and a central angle of $\theta = \frac{11\pi}{9}$?



- (3) Find the **exact** degree measure of the angle $-\frac{27\pi}{24}$

- (4) Express the angle in **Degrees, Minutes and Seconds**, to the nearest second.
 42.287°

- (5) **Length of Cable.** A cable is attached to the top of a stone monument that is 85 ft tall. The cable makes an angle of 60° with the ground. **How** far away from the base of the monument is the cable attached to a hook imbedded in the ground? [Remember to set up and equation before solving for the answer.]



Extra Credit:.....

- (1) **What** is the **length** of the **arc** in the circle with radius 12 inches and a central angle of $\theta = \frac{11\pi}{9}$ in the above **Problem #(2)** ?
- (2) **What** would be the supplementary angle to 143^0 ?

- (3) **What** is the angle of fun?