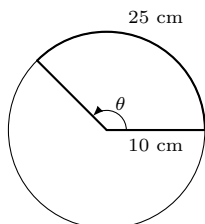


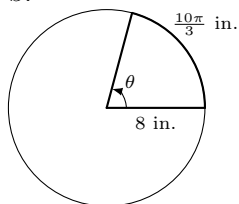
Math 29  
PAL Worksheet 22

1. Use the given arc length and given radius to find the measure of the central angle  $\theta$  (in radians).

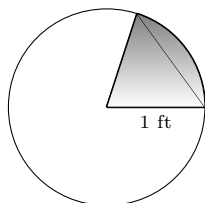
a.



b.



2. In a circle with radius 1 foot, the area of the shaded sector is  $\frac{\pi}{5}$  square feet. What is the measure of the central angle of this sector?



3. Draw a right triangle, labeling the lengths of the sides, if one of the acute angles in the triangle is  $\theta = \tan^{-1}\left(\frac{\sqrt{7}}{4}\right)$ . (Also label the angle  $\theta$  in your picture.)
4. Draw a right triangle, labeling the lengths of the sides, if one of the acute angles in the triangle is  $\theta = \sin^{-1}(v)$ . (Also label the angle  $\theta$  in your picture.) Use the triangle to find  $\cos \theta$  and  $\tan \theta$ .

5. For the graph shown

- state a rule of the form  $f(x) = a \cos(bx - c)$  whose graph appears to be identical to the given graph, and
- state a rule of the form  $f(x) = a \sin(bx - c)$  whose graph appears to be identical to the given graph.

