Math Xb Spring 2004
Worksheet: Right-Triangle Trigonometry
March 5, 2004

1. Find exact values for each of the following. Use your calculator only to check your answers.

   (a) $\sin\left(-\frac{\pi}{4}\right)$

   (b) $\cos\left(\frac{2\pi}{3}\right)$

   (c) $\tan\left(\frac{11\pi}{6}\right)$

   (d) $\csc\left(-\frac{5\pi}{6}\right)$

   (e) $\sec\left(\frac{11\pi}{4}\right)$

   (f) $\cot\left(-\frac{3\pi}{2}\right)$

   (g) $\sin\left(\frac{13\pi}{4}\right)$

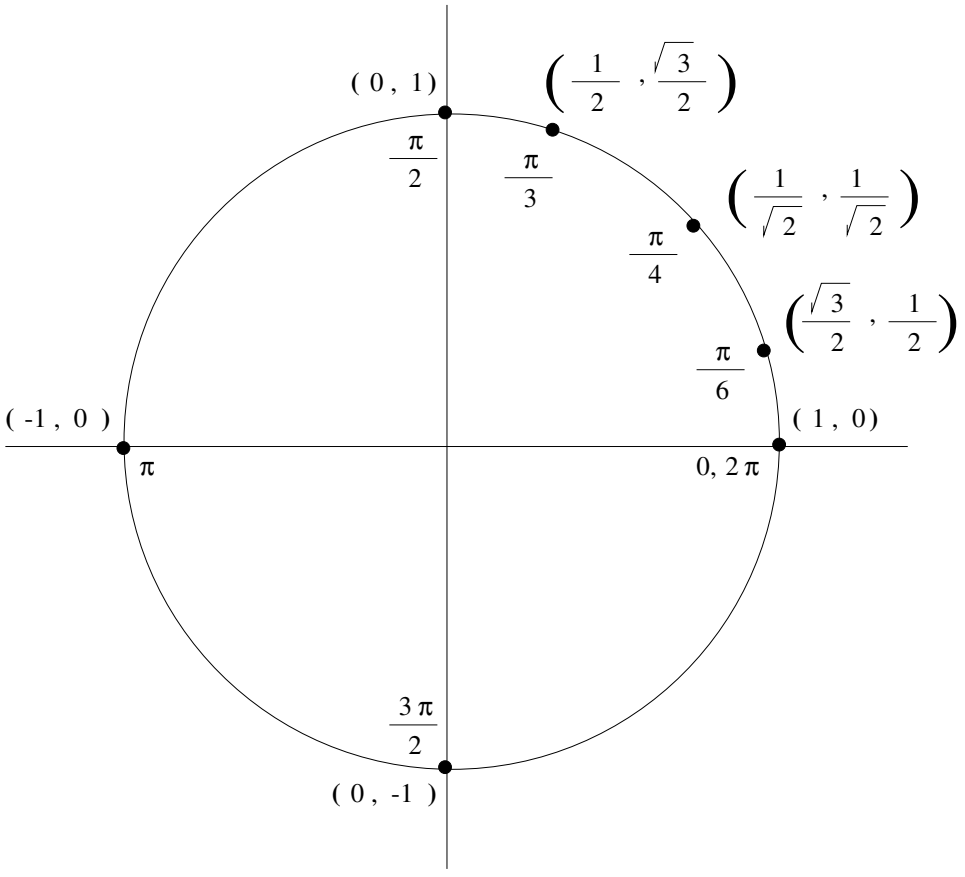
   (h) $\cos\left(-\frac{7\pi}{3}\right)$

   (i) $\tan\left(\frac{9\pi}{4}\right)$

   (j) $\csc\left(-\frac{5\pi}{3}\right)$

   (k) $\sec\left(\frac{\pi}{2}\right)$

   (l) $\cot\left(\frac{\pi}{6}\right)$



2. (a) For what values of x is $\tan x = \frac{1}{\sqrt{3}}$?

   (b) For what values of x is $\tan x = -\frac{1}{\sqrt{3}}$?

3. A boat is sailing north on the Nile at a steady pace. The river is straight and the boat maintains a distance of 60 feet from the eastern shoreline. At noon, the captain spots a temple on the eastern shore at a bearing of 25° degrees east of north. Fifteen minutes later the bearing is 35° degrees east of north. How fast is the boat going?