MA-115 (F,00)

[100 possible: 34, 30, 20, 8, 8] Quiz (Rads & Trig Values)

No calculators on Problems 1, 2 and 3. Name_____

All values are to be exact -- like $\sqrt{3}/2$.

1. In (1) at right: (a) In the first column, write the missing multiples of π/6 from 0 to 2π inclusive. Reduce to lowest terms. (b) Then write the values of sine and cosine for the numbers in the first column.

1.

α in rads Multiples of π/6	sin α	cos α
0		
$\frac{\pi}{2}$		
π		
$\frac{3\pi}{2}$		
2π		

2. Remember that tan ø = y/x. Give exact values of cosine and tangent for the numbers 3π/4, 3π/2, and 7π/4. Write answers in mathematical sentences, using correct notation.

Example: $\cos\frac{2\pi}{5} = \frac{\sqrt{6}}{7}$.

3. Find two values of ß that satisfy these equations. Give your answers in radians with $0 \le ß < 2\pi$. The equations are

(a) $\cos ß = \frac{1}{2}$. (b) $\tan ß = 1$.

4. (You may use your calculator for this problem.) Using the formula $\frac{\text{degs}}{360} = \frac{\text{rads}}{2\pi}$ that relates degrees and radians, do these showing your work below. Give your results as decimals and not as multiples of π.

a. Change 58.1° to radians. Put your result in the blank at right. 58.1° = _____ rads

b. Change 5.13 radians to degrees. Put your result at right. 5.13 rads = _____ degrees.

5. On the coordinate system at right. draw, in standard position, the two angles described below. You don't have to use a protractor, but your angles should be pretty close to what's requested. You'll have to label the angles, using the usual notation to indicate angle measures. The angles are

(a) 7π/6 radians; and (b) –1 radian.