

Show your work.  
All answers to  
2 decimal places.

**Math 120**  
February 8, 2005  
Quiz #4 A

Name \_\_\_\_\_  
(please print)

- (2) 1. Find ONE angle  $\theta$  **in degrees** so that  $\sec(\theta) = 1.7$   $\theta =$  \_\_\_\_\_
- (4) 2. Find ALL angles  $\alpha$  **in degrees** between 0 and  $2\pi$  so that  $2\cos^2(\alpha) - \cos(\alpha) = 0$ .  
 $\alpha =$  \_\_\_\_\_
- (6) 1. Find ALL angles  $\beta$  **in radians** (to 2 decimal places) between 0 and  $2\pi$   
so that  $7\sin(2\beta) - 3 = 1$ .  $\beta =$  \_\_\_\_\_

(4) 2. Verify the identity:  $\tan(x) + \cot(x) = \frac{\sin(x)}{\cos(x)} + \frac{\cos(x)}{\sin(x)}$  (Please write neatly.)

3. (a) In the rectangle sketch the graphs of
- (3)  $y_1 = 4\cos^2(x)$  and  $y_2 = 1.5 + (x/2)$  for  
 $0 < x < 2\pi$  and  $-1 \leq y \leq 5$ .
- (b) How many solutions does the equation
- (2)  $4\cos^2(x) = 1.5 + (x/2)$  have for  $x$   
between 0 and  $2\pi$ ? \_\_\_\_\_

