Math 49B (8:30am - 9:20am)
Quiz 1 Version B
Mon Jan 10, 2011

What month is your birthday?
What are the first 2 digits of your address?
What are the last 2 digits of your zip code?
What are the last 2 digits of your DeAnza ID number?

IF FOR GOTTEN

SCORE: \_\_\_ / 20 POINTS

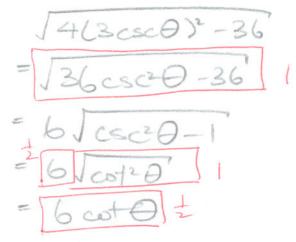
## NO CALCULATORS ALLOWED

## YOU MUST SHOW PROPER WORK TO RECEIVE FULL CREDIT

Use the trigonometric substitution  $x = 3 \csc \theta$ 

SCORE: \_\_\_ / 3 POINTS

to write the algebraic function  $\sqrt{4x^2-36}$  as a trigonometric function. Simplify your answer. (Assume  $0 < \theta \le \frac{\pi}{2}$ .)



Prove that  $\frac{\cot x \cos x}{1 - \sin x} - 1 = \csc x.$ 

SCORE: \_\_\_ / 6 POINTS

$$= \frac{\cos x}{\sin x} \cdot \cos x$$

$$= \frac{\cos^2 x}{\sin x(1-\sin x)}$$

$$= \cos^2 x - \sin x(1-\sin x)$$

$$= \cos^2 x - \sin x + \sin^2 x$$

$$= \sin^2 x + \sin^2 x - \sin x$$

$$= \cos^2 x + \sin^2 x - \sin x$$

$$= \cos^2 x + \sin^2 x - \sin x$$

$$\begin{aligned}
+zu^2 &\times = \sec^2 \times -1 \\
&= \left(\frac{3}{2}\right)^2 - 1 \\
&= \left(\frac{3}{2}\right)^2 -$$

Using the fundamental identities, simplify  $\cos(-m)\sec(\frac{\pi}{2}-m)$ .

SCORE: \_\_\_ / 2 POINTS

Prove that  $\cot x - \sec x \csc x = -\tan x$ .

SCORE: \_\_\_ / 6 POINTS