Math 51 (9:30am – 10:20am)
Quiz 5
Fri May 22, 2009

SCORE: ___ / 20 POINTS

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 social security number ? ___ ___
[IF YOU DO NOT HAVE A SOCIAL SECURITY NUMBER, USE YOUR STUDENT ID NUMBER]

NO CALCULATORS ALLOWED

Simplify $\dfrac{\cos x}{\sin x}+\dfrac{\sin x}{1+\cos x}$.

SCORE: ___ / 4 POINTS

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

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

$$= \frac{\cos x+1}{\sin x(1+\cos x)}$$

$$= \frac{1}{\sin x} = \csc x$$

Prove $\tan^2 x\sin^2 x=\tan^2 x+\cos^2 x-1$.

SCORE: ___ / 5 POINTS

SEE 7:30 KEY

Write $\csc x$ in terms of $\cos x$.

SCORE: ___ / 3 POINTS

SEE 7:30 KEY

Simplify $\dfrac{\csc x \sec x}{\cot x}$. The final result should be a constant, a single function or a power of a function.

SCORE: ___ / 3 POINTS

SEE 7:30 KEY

Prove $\dfrac{\sec x - 1}{1 - \cos x} = \sec x$.

SCORE: ___ / 5 POINTS

SEE 7:30 KEY