

## 9.2 Trig Integrals

Calculus

Name: \_\_\_\_\_

**CA #1**

In this practice set you will find definite integrals, indefinite integrals, AND derivatives.

1. $\int 4 \cos x \, dx$	2. $\int (\sin x - 3 \csc^2 x) \, dx$	3. $\int_0^{\pi/6} \sec^2 x \, dx$
4. $\int_{-\pi/3}^{5\pi/6} 2 \sin x \, dx$	5. $\frac{d}{dx} \cos 4x$	6. $\int_{\pi/12}^{3\pi/12} 6 \csc 3x \cot 3x \, dx$
7. $\int \frac{1}{ x \sqrt{x^2-1}} \, dx$	8. $\int \frac{10x}{25x^4+1} \, dx$	9. $\int_{\pi/10}^{\pi/5} 15 \sin 5x \, dx$
10. $\frac{d}{dx} \tan^2 5x$	11. $\int \frac{\cos x}{\sin^2 x} \, dx$	

Answers to 9.2 CA #1

1. $4 \sin x + C$	2. $3 \cot x - \cos x + C$	3. $\frac{\sqrt{3}}{3}$	4. $\sqrt{3} + 1$	5. $-4 \sin 4x$	6. 0
7. $\sec^{-1} x + C$	8. $\tan^{-1}(5x^2) + C$	9. 3	10. $10 \tan 5x \sec^2 5x$		11. $-\csc x + C$