Notes 68 **Name _____**

Antiderivatives (4.9)

Indefinite Integrals: *Evaluate the indefinite integral.*

1. $\int \left(3x^2 - x - e^x\right) dx$

2. $\int \sec\left(x+5\right)\tan\left(x+5\right)\ dx$

Initial Value: *Find y or f(x) using the initial value.*

3. $\frac{dy}{dx} = \cos 5x, \quad y\left(\frac{\pi}{4}\right) = 2$

4. $f''\left(x\right) = \frac{3}{\sqrt{x}}, \quad f\left(4\right) = 20, \ f'\left(4\right) = 7$

Indefinite Integrals: *Evaluate the Indefinite Integral.*

5. $\int \frac{x^3+3x-4}{x^2}\,dx$

6. $\int (\cos x+\sin x)\,dx$

Initial Value: *Find y or f(x) using the initial value.*

7. $\frac{dy}{dx}=2x-\frac{3}{x^4},\ x>0,\ y(1)=3$

8. $f''(x)=x^3-2x+1,\quad f(0)=0,\ f'(0)=1$