

Physics 303 Math Review Sheet

Name:

Evaluate the following derivatives and integrals for some practice. Turn it in on Tuesday with your other homework. Please make sure to show your work.

1. $\frac{d}{dx} (12x^2 - 3x + 2)$

6. $\int 8x^2 + 3x - 12 dx$

2. $\frac{d}{dx} \left(\frac{5}{x} + \sqrt{x} - 0.3x^3 \right)$

7. $\int_0^{2\pi} \sin(x) dx$

3. $\frac{d}{dx} \left(\frac{x^2}{\sqrt{x^2}} \right)$

8. $\int_0^{10} 10 \exp\{-2x\} dx$

4. $\frac{d}{dx} (\sin(3x))$

9. $\int_1^5 \frac{dx}{\sqrt{9+x^2}}$

5. $\frac{d}{dx} (\cos(2x) \exp\{-3x\})$

10. $\int_{-3}^3 2x^2 dx$