

## Derivatives Test

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

Student ID Number: \_\_\_\_\_

Instructor's Name: \_\_\_\_\_

Section Number: \_\_\_\_\_

Calculate the following derivatives. Do NOT simplify your answers!

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1.  $\frac{d}{dx} (6x^5 + 4x^{-8} - 10x^2 + 5) =$

2.  $\frac{d}{dt} (t^2 - 2t + 1)^5 =$

3.  $\frac{d}{dx} \frac{3x + \sin x}{x^2 - 2} =$

4.  $\frac{d}{ds} \sqrt{s^2 + 5s^{-1}} \tan s =$

5.  $\frac{d}{dx} e^{\frac{x}{x+1}} =$

6.  $\frac{d}{dx} \sin(4x^3 + x^{-6}) =$

7.  $\frac{d}{d\theta} (\sin \theta)^{\frac{1}{2}} (\cos \theta)^{\frac{1}{3}} =$

8.  $\frac{d}{dt} e^{\sqrt{t^2 - 3t + 1}} =$

9.  $\frac{d}{dx} (x^e + e^x - \sin(xe)) =$

10.  $\frac{d}{ds} (1 + \sin s)(s^2 - \cos(s + 2)) =$