Math 152 **Calculation Exam D-04**

Name: _____ Score: _____

Instructions: There are 10 functions on this exam. Compute their derivatives using our derivative rules. You must completely correctly calculate at least 8 of the 10 derivatives in order to pass. You may not use a calculator, and you do not need to simplify!

1. $f(x) = 3x^{10} - 4x^6 + 15x$

2. $g(y) = 2 - \frac{17}{y^8}$

3. $h(x) = (x^3 - x + 1)e^x$

4. $k(w) = \dfrac{3^w - 2w^4 + \sqrt{w}}{\sqrt{w^2 - 7}}$

5. $p(t) = \dfrac{te^t}{t^2 + 1}$

6. $F(x) = e^x \tan(x) + 3\cos(x)$

7. $G(y) = \dfrac{\sec(y)}{y^3 + 5\cot(y) - 1}$

8. $H(z) = \sqrt{z^2 - 3} + z^2 \ln(z)$

9. $K(w) = \sin(3w^2 - 5) + \cos^2(w)$

10. $P(t) = 2^{\tan(t)} + e^{x^3 - x + 1}$