Quiz 3

Dean Zeller **Name:** _____
MATH176 **25 points**
Spring 2021 **Due: Friday, April 2nd**

Instructions
In the space provided, answer the following questions. It is not a requirement to specifically use Zeller's Rules of Derivatives in the answer – any method of explanation that gets the point across is acceptable for full credit.

Question 1 – Basic Form (10 points)
Write out the full solution to the derivative problems below. Indicate which of Zeller's Rules were used to get the solution.

1. $f(x) = 17x^9 + 14x^3$

2. $g(x) = 45e^{10x}$

3. $h(x) = \sin(10x) - 4\cos(25x) + 9x^2$

Question 2 – More Complex Expressions (15 points)

Write out the full solution to the derivative problems below. Indicate which of Zeller's Rules 7, 8, or 9 were used to get the solution. You do not need to mention rules 1 thru 6.

1. $a(x) = e^{10x} \sin(3x)$

2. $b(x) = \frac{\cos(5x)}{16x^3}$

3. $c(x) = 4\sin(16e^{4x})$