

Name _____

- No calculators allowed.
- Show sufficient work to justify each answer.
- You have 15 minutes for this quiz.

1. (2 points each) Differentiate the following functions.

(a) $g(t) = \frac{t^3}{\sec t}$

(b) $y = \sec x \cot x \sin x \cos x \csc x$

2. (3 points) Given $h(t) = \tan(5t)$, find its second derivative $h''(t)$.

3. (3 points) Differentiate the following function.

$$g(x) = \sqrt[3]{\sin(x^5 + 4x)}$$