Quiz #3

Directions: Carefully read each question below and answer to the best of your ability in the space provided. You **MUST** show your work to receive full credit! Your answer to problem # 2 should be written in a clear and concise manner using a combination of complete sentences and symbolic expressions. An answer without explanation or that is poorly presented may not receive full credit.

1. (1 point) Suppose f and g are continuous functions such that $g(3) = 2$ and

$$\lim_{x \to 3} [4f(x) + f(x)g(x)] = 54.$$

   Find $f(3)$.
   - A. $\frac{54}{7}$
   - B. 5
   - C. 0
   - D. 9
   - E. You cannot find it because $f(3)$ may not exist.

2. (2 points) If $f(x) = ax^2 + b$, find $f'(c)$ and use it to find an equation of the tangent line to the curve $y = ax^2 + b$ at the point $(c, ac^2 + b)$.

Name: _____

Question:	1	2	Total
Points:	1	2	3
Score:			