

Name _____

Mathematics 105D: Calculus I
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David Haines
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Quiz #9

Here is a formula for f : $f(x) = x^2$

The formula for $f'(x)$ is: _____

The formula for $f''(x)$ is: _____

Use the above formulas to evaluate these limits:

A. $\lim_{h \rightarrow 0} \frac{f(4+h) - f(4)}{h} =$

B. $\lim_{h \rightarrow 0} \frac{f'(4+h) - f'(4)}{h} =$

C. $\lim_{h \rightarrow 0} \frac{f(7+h) - f(7)}{h} =$

D. $\lim_{x \rightarrow 10} \frac{f(x) - f(10)}{x - 10} =$