

Name \_\_\_\_\_

Mathematics 105: Calculus I  
Fall Semester 2009  
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September 28  
Quiz #7

There is no formula for  $f(x)$ , but you can use this table of values for the function  $f$  and its first two derivatives:

$x$	1	2	3	4	5
$f(x)$	4	7	8	10	14
$f'(x)$	3	12	18	2	4
$f''(x)$	9	11	4	6	6

Evaluate these limits:

A. 
$$\lim_{h \rightarrow 0} \frac{f'(3+h) - f'(3)}{h} =$$

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

C. 
$$\lim_{x \rightarrow 5} \frac{f'(x) - f'(5)}{x - 5} =$$

D. 
$$\lim_{x \rightarrow 1} \frac{f(x) - f(1)}{x - 1} =$$