Quiz 2.1

Name

1. Let f be the function defined by $f(x) = 2x^3 - x$. Which of the following expressions is the average rate of change of f on the interval $[1, 3]$?

(A) $\frac{f(3)+f(1)}{2}$

(B) $\frac{f(3)+f(1)}{3+1}$

(C) $\frac{f(3)-f(1)}{3-1}$

(D) $f(3) - f(1)$

2.

x	-3	-1	1	3
$g(x)$	12	0	1	-4

Selected values of a function g are shown in the table above. What is the average rate of change of g over the interval $[-3, 3]$?

(A) $\frac{3-(-3)}{(-4)-12}$

(B) $\frac{(-4)-12}{3-(-3)}$

(C) $\frac{12+(-4)}{2}$

(D) $\frac{12+0+1+(-4)}{4}$

3. Let f be the function defined by $f(x) = 2\sin x + \cos x$. The average rate of change of f over the interval $[0, b]$ is 0.05, where $b > 0$. Which of the following is an equation that could be used to find the value of b ?

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(A) $f(b) = 0.05$

(B) $f(b) - f(0) = 0.05$

(C) $\frac{f(b)-f(0)}{b-0} = 0.05$

(D) $\frac{f(b)+f(0)}{2} = 0.05$