

Math 124 Quiz #3

NAME _____

No books or notes allowed. Show all of your work.

1 [6 points] If $y = \sin(e^{10x-3})$ then calculate y' . There is no need to simplify your answer.

Answer: $y' =$ _____

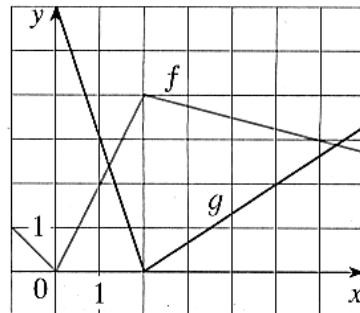
2 [6 points] $f(x) = \tan(3x+1)$ then calculate $f''(x)$.

Answer: $f''(x) =$ _____

3 [4 points] f and g are the functions whose graphs are shown. If the derivative does not exist, write "DNE".

(a) If $u(x) = g(f(x))$ then $u'(1) =$ _____

(b) If $v(x) = f(g(x))$ then $v'(1) =$ _____



4 [4 points] The function $P(x)$ tells the number of pounds P of fertilizer required by a lawn of size x acres over the summer.

(a) The units of $\frac{dP}{dx}$ are _____.

(b) The derivative measures _____

_____ (a complete English sentence)