Math 151

Show Your Work! October 15, 2018 Name _____
Good Luck! Quiz #3 A (please print)

1. Quickies – just write the answer. A, B and C are constants. (1 point each)

(a) $D(\sin(5-3x)) =$ _____ (b) $D\left(\ln(x^3+2)\right) =$ _____

(c) $D\left(\sec(x^2)\right) =$ _____ (d) $D\left(\sqrt{7+x^4}\right) =$ _____

2. Calculate the following derivatives. **Circle each answer.** (**Do NOT simplify** your answers.)
(3 points each)

(a) $D\left((x^2+\cos(x))^3 \right) =$

(b) $\frac{d}{dx}\left(e^{3x}\cdot\ln(7x) \right) =$

(c) $\frac{d}{dt}\left(\sin\left(\frac{2}{x}\right)+\tan(Ax) \right) =$

(d) $\frac{d}{dt}\left(\ln(\, x^3+\sin(5x)\,) \right) =$

3. f(1) = 3 and f '(1) = 2. Then at x=1 $D(\, f^3(x)\,) =$ _____ and $D(\, f(x^3)\,) =$ _____
(4)

4. T(x) is the temperature (^oF) at a depth of x meters. Explain in a clear complete sentence the meaning of **" T '(2000) = 0.03 "** so someone who did not know calculus could understand.

(2)