

Math 16A (Summer 2008)
Kouba
Quiz 4

PRINT Name : -----

Exam ID # : -----

1.) (5 pts. each) Use shortcut rules to find the derivatives of each function. Do not simplify answers.

a.) $y = x^3 \tan x$

b.) $f(x) = (7x - 4)^{2/3}$

c.) $y = \frac{x^2 - 5x}{\sec x}$

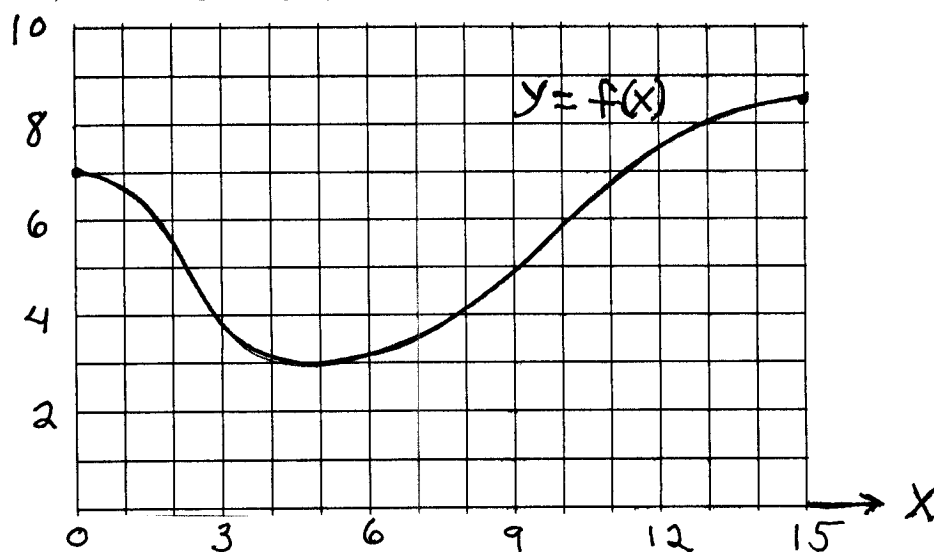
d.) $y = \left(\frac{x + 4}{3 - 2x} \right)^5$

e.) $g(x) = 5 + 4 \cos(x^2)$

f.) $g(x) = \sin^3(\cos(4x))$

3.) (10 pts.) Assume that $f(x) = x(4 - x)^3$. Solve $f'(x) = 0$ for x .

4.) (5 pts. each) Use the given graph of f to estimate each of the following.



a.) the Average Rate of Change (ARC) for f on the interval $[0, 9]$

b.) the Average Rate of Change (ARC) for f on the interval $[5, 13]$

c.) the Instantaneous Rate of Change (IRC) for f at $x = 5$