

Math 16A (Summer 2010)
Kouba
Quiz 3

PRINT Name : -----

Exam ID # : -----

1.) (10 pts.) Use $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ to find the derivative of $f(x) = 3x^2 - x + 1$.

2.) (5 pts. each) Use shortcut rules to find the derivatives of each function.

a.) $y = (1/2)x - 3$

b.) $f(x) = x^{-3} + x^2 - 8x^{1/4}$

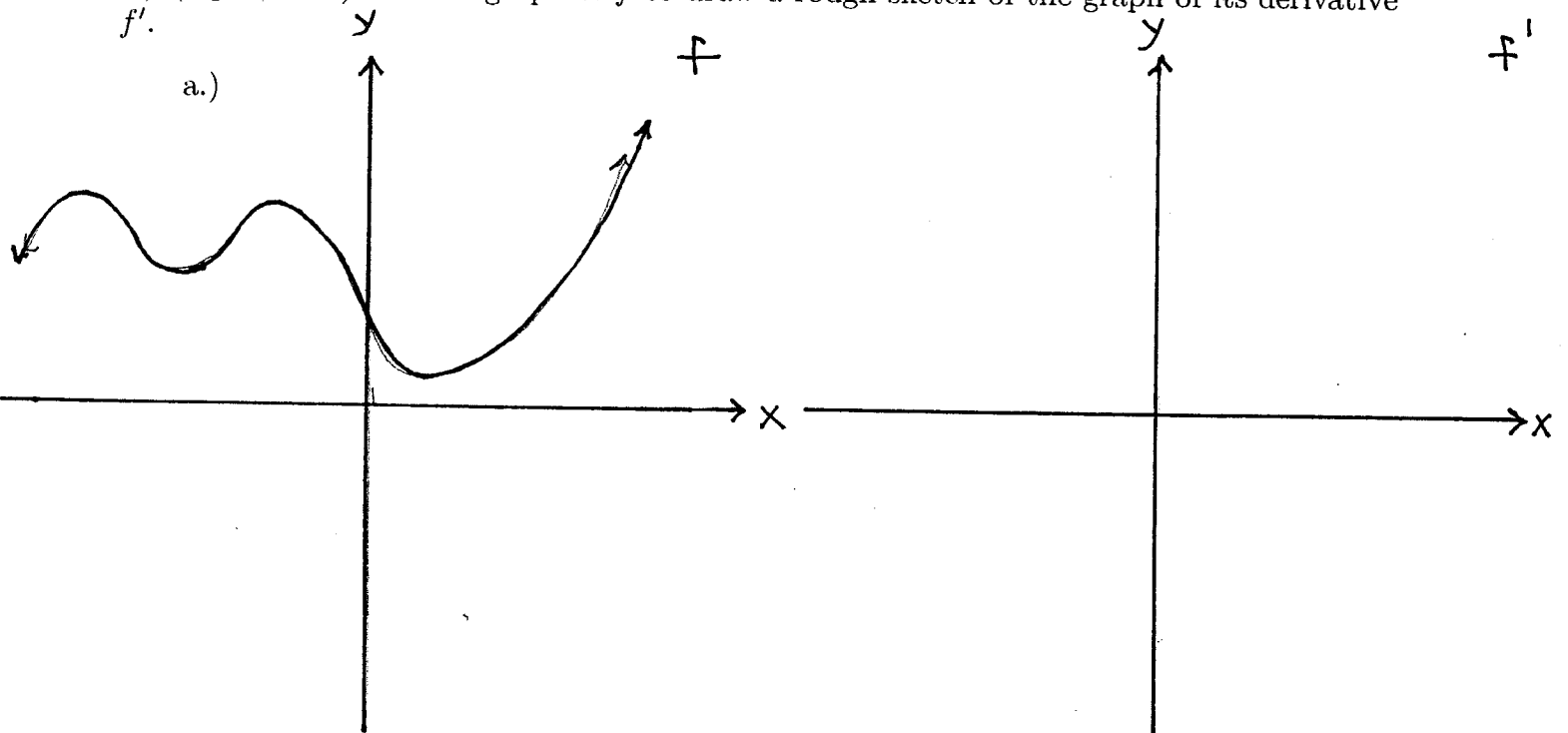
c.) $y = \frac{x^3 - x}{x - 3}$

d.) $g(x) = (2 - x)(3x + 7)(4 - \sqrt{x})$

3.) (6 pts.) Find an equation of the line tangent to the graph of $f(x) = \frac{x^2}{2-x}$ at the point $x = 3$.

4.) (7 pts. each) Use the graph of f to draw a rough sketch of the graph of its derivative f' .

a.)



b.)

