AP Calculus BC                                                    Name: _____
Graded HW – Chain Rule


Suppose that the functions f and g and their derivatives with respect to x have the following
values at x = 0 and x = 1.

| $x$ | $f(x)$ | $g(x)$ | $f'(x)$ | $g'(x)$ |
|-----|--------|--------|---------|---------|
| 0   | 1      | 1      | 5       | 1/3     |
| 1   | 3      | −4     | −1/3    | −8/3    |

Evaluate the derivatives with respect to x of the following combinations at the given value of x.


1.  f(g(x)) at x = 0                                2.  g(f(x)) at x = 0


3.  5f(x) − g(x), x = 1                             4.  f(x + g(x)) at x = 0


5.  f(x) g³(x) at x = 1