Homework 4

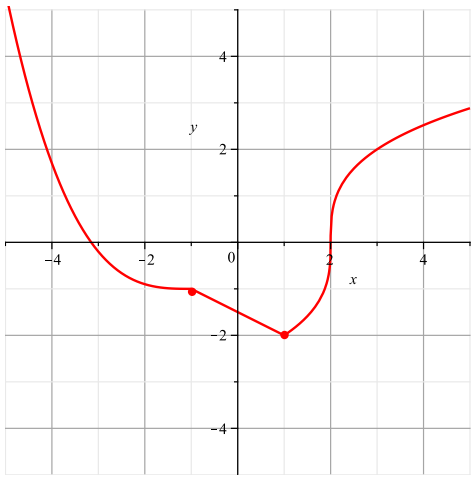
Due: 10-28-13

Use the functions f, g, and h defined below to answer problems 1-4.

$$f(x) = 3x^2 - 4x + 1,$$

x	0	1	2	3
$g(x)$	1	2	4	8
$g'(x)$	0.7	1.4	2.8	5.5

Graph of $h(x)$:



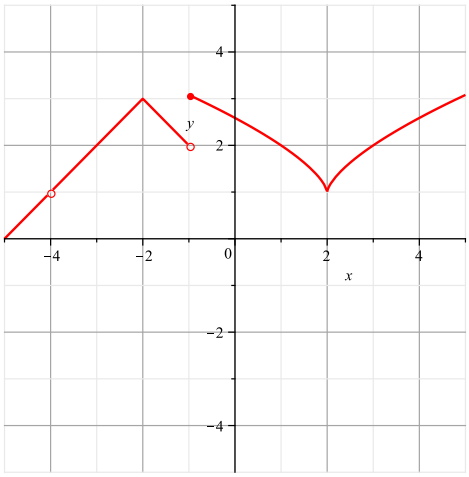
Problems 1-4 – Find the following:

1. $f'(x)$
2. $(fg)'(2)$
3. $(h+g)'(0)$
4. $(g^{-1})'(1)$

Problem 5:
Find $\frac{dy}{dx}$ given the expression $\ln(x) + \ln(y^2) = 3$.

Problem 6:
Let k be given by the following graph:

Graph of $k(x)$:



Evaluate $\left.\dfrac{d}{dx}\sinh(k(x))\right|_{x=-3}$.