

Math 103, Fall 2014
Week 7

After Class Homework
Due Monday, October 20

1. If $y^3 = 2x^2 - 5x + 27$, find $\frac{d^2y}{dx^2}$. (Solve to get $y'' = \dots$ where \dots includes x and y , but does not include y' .)
2. If $f(x) = x^7 - 3x^2 + 2$, find $\frac{d}{dx}f^{-1}(x)$ (your answer will include $f^{-1}(x)$).
3. Find $\frac{d}{dx} \frac{e^x \sqrt{\cos x}}{(x+2)(x+3)^2}$.
4. Suppose you have an unknown function g with the following table of

	x	1	2	3	4	5	6	7
values	h(x)	-4	-3	-1	0	2	3	8
	h'(x)	4	2	0	1	2	3	3

What is $(h^{-1})'(2)$?