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Math126, Test I

February 9, 1999

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Multiple Choice

1.(5pts) Let $f(x) = e^x + \ln x$ for $x > 0$. Find $\frac{df^{-1}}{dx}(e)$.

- (a) $\frac{1}{e}$ (b) e (c) $\frac{1}{e+1}$ (d) f is not one to one (e) $(e^e + \frac{1}{e})^{-1}$.

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4.(5pts) Find all solutions of the equation $\log_4(1 + 2x) = \log_2(3)$

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5.(5pts) For $x > 0$ let $f(x) = \int_1^{x^2} \frac{1}{t} dt$. Find $\frac{df}{dx}$.

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11.(10pts) Consider the function $f(x) = \sqrt{1+x^2}$.

- a) Show that f is one to one on the domain $(0, \infty)$.
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$$f(x) = \sqrt[3]{\frac{(x^2 - 1)^4 e^{\sin x}}{(x + 1)^5}} .$$

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Instructor-section: Bullwinkle
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5.	(●)	(b)	(c)	(d)	(e)
6.	(a)	(b)	(c)	(●)	(e)
7.	(a)	(●)	(c)	(d)	(e)
8.	(●)	(b)	(c)	(d)	(e)
9.	(a)	(b)	(●)	(d)	(e)
10.	(a)	(b)	(c)	(d)	(●)