

MA 125-06
§4.2-4.5

Quiz #7

score

Name: _____

10 November 2000

1. Let $f(x) = \ln(x^2 + 2)$ be defined on the interval $[-2, 3]$. Find all relative extrema of f and find the extreme values for f on the interval. Also, determine the exact values of the critical points and intervals of concavity. Sketch the graph of f and label all the important points. (10 points)

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2. Evaluate (and show your work) $\lim_{x \rightarrow 0} \frac{e^x - x - 1}{1 + x^2 - \cos x}$. (5 points)

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3. Evaluate (and show your work) $\lim_{x \rightarrow \infty} x \ln(1 - 1/x)$. (5 points)