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Math 1210-2

Quiz 8

November 9, 2007

Show all work for complete credit!

1a) What is the statement of the Mean Value Theorem, for a function $f(x)$ which is continuous on the closed interval $[a, b]$ and differentiable on the open interval (a, b) ?

(1 point)

1b) Verify the Mean Value Theorem, for $f(x) = \frac{1}{x}$, $1 \leq x \leq 3$.

(3 points)

2) Compute the following antiderivatives:

2a)

$$\int x^2 + 3 \sin(2x) + \frac{1}{x^3} dx$$

(3 points)

2b)

$$\int \frac{7t^2}{\sqrt{10 + 15t^3}} dt$$

(3 points)