Analysis 2 - HW

Note Title 4/9/2013

① Define $f: C[0,2] \to C[0,2]$, $f(x) = \int_0^t x(s)\,ds$, $t \in [0,2]$. Recall that $C[0,2]$ is the set of all cont. functions on $[0,2]$ with the metric $\rho(x,y) = \max_{0 \le t \le 2} (|x(t) - y(t)|)$. For example $f(t^2) = \int_0^t s^2\,ds = \frac{1}{3}t^3$

a) Is f onto?

b) Is f one-to-one?

c) Is f continuous?

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