Math 241: HW 6

Due on Monday, June 17

Summer '13

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Problem 1

Consider the function $f(x) = x^3 - 3x - 1$. Does this function have a root on $[-2, 2]$? (explain why) If there is a root, is it unique? (explain)

Problem 2

Prove that

$$|\sin(x) - \sin(y)| \leq |x - y|$$

for any x, y in the reals.