

Homework 2

Name:

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P 1. Let c be greater than 4 and an x -coordinate of the points of intersection of the two curves given by $f(x) = x^3 + 72$ and $g(x) = 11x^2 - 10x$. Is

$$F(x) = \begin{cases} \sqrt{x} + 3, & x \leq c \\ |x - 2| - 1, & x > c \end{cases}$$

continuous at c ? Explain.

P 2. Find constants a and b such that

$$f(x) = \begin{cases} ax^2 - 3, & x \leq -3 \\ \sin(\pi x) + b, & x > -3 \end{cases}$$

is continuous everywhere.