

Assignment 4: Due Mon Sept 18th

$$f(x) = \sqrt[3]{x} - \sqrt[9]{x}$$

Give the following answers using interval notation.

-On what interval(s) is $f(x)$ defined? (What is its domain?)

-On what interval(s) is $f(x)$ continuous? Why?

-On what interval(s) is $f(x)$ differentiable? Why? A graph is a clue, but not a proof; prove your answer using the definition of differentiability.