Kerry Ojakian's MTH 32 Class

Class Assignment #1

General Instructions:

- You may work in a group of **at most 3 students**.
- Hand in **one** assignment for your group; write each group member's full name on the assignment.

The Assignment

1. Let $g(u) = \begin{cases} 4u^{10} & \text{if } u > -1 \\ 4 & \text{if } u \leq -1. \end{cases}$

   (a) Find $\lim_{u \to -1} g(u)$ or state why it does not exist.

   (b) Where is g continuous? (Give an intuitive justification based on the graph)

   (c) Where is g differentiable? (Give an intuitive justification based on the graph)

2. (a) Differentiate $\sqrt{u}$

   (b) Differentiate $\sqrt{2x^3 + 17}$

3. From the workbook (at course webpage), do Section 1 (page 5): Problem 21.