Continuity and Differentiability
Student Worksheet

Objective: To determine when a function is continuous or differentiable.

Directions: Following directions on the TI-*n*spire to determine when the given functions are continuous and/or differentiable.

PART I: For each question write the function with values of **a** or **b** that you found to make the function continuous.

Problem 2:

Problem 3:

Problem 4:

Problem 5:

Problem 6:

Problem 7:

Extension: Go back to each problem and determine if there is more than one solution that will result in a continuous function. If so, explain whether or not the additional solutions produce a differentiable or non-differentiable function.

PART II: *Directions -* Calculate the derivative of each function using the values from part I and determine if the function is differentiable. Explain your conclusion.