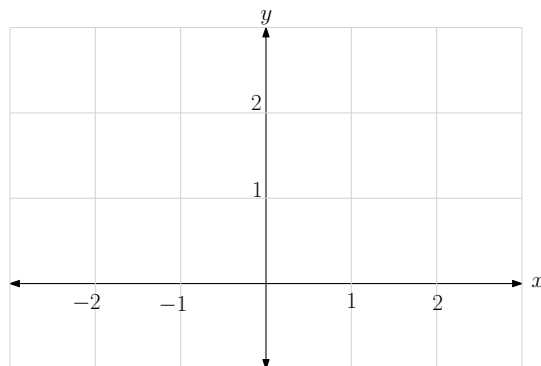Math 201 - Quiz #7   Name: _____

Solve as few or as many as you think you need to maximize your score. Please put an X through the problems you do not want graded.

1. Use the guidelines for curve sketching the produce a sketch (**draw this on the provided window**) for the function
$$f(x) = \frac{x-1}{x}.$$

   To receive full credit on this problem you must cover all parts of the guidelines.

2. You need to build a running track formed from a rectangle joined with two semicircles as pictured below. The length around the entire track needs to be 2 km. Your design must maximize the area of the rectangular plot enclosed by the track. Find the dimensions of this maximized rectangular plot.