1. Let \( g(x) = x(x - 1) \).
   
   a. SKETCH a graph of \( g \) for \(-1 \leq x \leq 2\), labeling your axes.
   
   b. USING THE GRAPH from part (a), sketch a rough graph of \( g' \), again, labeling your axes.
   
   c. WRITE OUT THE DEFINITION of the derivative function, \( f'(x) \), for any arbitrary function \( f(x) \).
   
   d. APPLY THE DEFINITION of derivative in part (c) to find the derivative function \( g'(x) \). HINT: Can you simplify \( x(x - 1) \) to make it easier to work with algebraically?
   
   e. Find \( g'(1) \) EXACTLY, using your result from part (d). OR (if you are unsure about your answer to part (d)) ESTIMATE \( g'(1) \), using a difference quotient.

2. EXTRA CREDIT: Let’s assume your anxiety level, \( A \) is measured in units of “angsts,” and \( x \) is the number of problems on a Quiz. If \( A = g(x) \) (as given in [1]) represents your anxiety level (in angsts) as a function of number of problems on a Quiz, interpret your result in part (e). [That is, if \( g'(1) = \text{blah}, \) this means that.....].