Name ____

Math 131 - Quiz 4 February 15, 2023

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Use the limit definition of derivative to determine f'(x)when $f(x) = 3x - x^2$.

2. (2 points) Suppose $F(x) = (x+2)e^{x^2}$. Later, we will learn how to show that $F'(x) = (2x^2 + 4x + 1)e^{x^2}$. For now, just use the given information to find an equation of the line tangent to the graph of F at the point where x = 0.

3. (3 points) The graph of y = f(x) is shown below. Give the x-coordinates of three points at which f'(x) does not exist. For each point, very briefly say why f' does not exist.

