Math 131 - Quiz 5

Name _____

February 20, 2023   Score _____

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

1. (8 points) Use derivative rules to determine each derivative. Do not simplify your answers.

   (a) $\dfrac{d}{dx}\left(1 + x + 2x^2 + 3x^3\right)$

   (b) $\dfrac{d}{dx}\left(\sqrt{x} + \dfrac{5}{x^2}\right)$

   (c) $\dfrac{d}{dx}\left(5x^3 \tan x\right)$

   (d) $\dfrac{d}{dx}\left(\dfrac{x^2 + 1}{\cos x}\right)$

2. (2 points) Find an equation of the line tangent to the graph of $y = x^8 - x$ at the point where $x = 1$.