ACMAT161 Summer 2024
Professor Manguba-Glover
Homework 8 Name: _____

Show all work and simplify all answers before circling/boxing them. If you do the problem incorrectly, or don't show sufficient work, you will be asked to rewrite the problem for full credit.

Due next class. Students who turn assignments in late (or do not attempt a problem) forfeit their ability to rewrite those problems for credit.

1. Find the equation of the tangent line to the graph of $f(x) = \dfrac{5}{x}$ at $x = 2$ using limits.
2. Find the equation of the tangent line to the graph of $f(x) = \dfrac{4}{x^2}$ at $x = -1$ using limits.
3. Find the derivative of $f(x) = 5x^2 - 3x + 7$ using limits.
4. Find the derivative of x^3 using limits.
5. Find the derivative of $1 + \sqrt{x}$ using limits.
6. Match the derivative graphs with the graphs of their corresponding functions