

YOUR NAME: \_\_\_\_\_

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Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Compute the derivative of the function

$$f(x) = \frac{x^5}{(3x+1)^7}.$$

You do not have to simplify.

2. Find an equation for the tangent line to  $y = \frac{1}{\sqrt[3]{(3x+5)^2}}$  at  $x = 1$ .