

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  $f'(x)$  of  $f(x) = (x + 6\sqrt{x})(x - 2\sqrt[3]{x})$  using the product rule and leave your answer in root (not exponent) form.

2. Find an equation for the tangent line to the graph of  $y = \frac{5x + 3}{2 + x}$  at  $x = 5$ .