

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. Use the **limit definition of the derivative** to calculate $f'(2)$, if $f(x) = \frac{1}{2x+1}$.

2. Using your **derivation rules**, find an equation for the tangent line to the graph of

$$f(x) = x^2 - \frac{1}{\sqrt{x^3}} \quad \text{at } x = 1.$$