

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. Find an equation for the tangent line to the graph of  $f(x) = 3x^2 - \frac{2}{x}$  at  $x = 2$ .

2. Compute the following derivatives:

(a)  $\left[(x^5 - 4x^3)\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)\right]' =$

(b)  $\left(\frac{x^3 + x}{x^2 - 2}\right)' =$