

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 parametric curve $(\frac{1}{t} - 3t, t^3)$ at $t = -1$.

2. Consider the parametric path $(3t, 4t^{3/2})$.

(a) Write an equation for the path in rectangular coordinates and simplify.

(b) Find the length of the path for $0 \leq t \leq 1$.