

YOUR NAME: _____

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

1. [5 points] Showing all steps, find $T_5(x)$, for $f(x) = \ln(1+x)$, centered at $a = 1$.

2. [5 points]

(a) Find $T_3(x)$, for $f(x) = x^4 - 2x$, centered at $a = 2$.

(b) Find the exact error (not an estimate) made in computing $f(2.1)$ by using $T_3(x)$ instead of $f(x)$ (this needs a calculator, but show all your work before plugging into the calculator).