Name: _____

- This packet is due at **5:00 pm PDT on Wednesday, May 26**.
- Neatly fill out this packet either directly or on your own paper. Then upload your answers to Canvas. Please clearly number each problem and keep them in order.
- For each problem in this packet, **organize and show all of your work and justification** for your answer.
- Make sure that it is clear what your final answer is. This may mean boxing/circling it or it may mean doing neither.
- If you are required to draw a graph of a function, each axis must be labeled and given a scale.
- I will not be grading every individual problem, but answers will be available on Canvas after the due date.
- I am happy to help you however I can. Here are some options:
  - Come to my office hours (see syllabus).
  - Email me directly at gknapp4@uoregon.edu

1. Find the Taylor polynomial of degree 2 for $f(x) = \sqrt{x}$ centered at $a = 4$.

2. Compute the Taylor series of $g(x) = x^3$ centered at $a = 1$

3. Find a formula for the nth Taylor coefficient for $f(x) = \sin(x)$ at $a = 0$.

4. Use the Maclaurin Series for $f(x) = e^x$ to estimate e^{-4} with error < 0.0001.