

MATH 2300
Weekly-Work Prompts

All responses are to be uploaded to Canvas for their corresponding weeks. All responses are due the Sunday of the week they are assigned.

Due	Prompt
Week 2	Write a few sentences describing what you've liked about the class so far, what you've disliked about the class so far, anything you are looking forward to about the class, and anything you are concerned about moving forward. Also, for each day that we do group work, write down one thing that every member of your group has in common.
Week 3	Looking back on the first two weeks of class, what are some suggestions you have to make the lecture portion of class more accessible to you? For example, more individual work time during lecture, less individual work time, slower, make more individuals answer my questions, more use of technology, less use of technology, more examples, etc.
Week 4	Just say a few words about the exam. How did you feel about it? Did you feel it was fair? Etc.
Week 5	How do you feel about all the physics stuff?
Week 6	Now that we've had a couple group quizzes, how do we feel about them? Would you like to have another vote to change the format or would you like to continue doing group quizzes?
Week 7	What did you think of midterm 2?
Week 8	What is your favorite Pokemon? If you don't have one, follow this link and pick one!
Week 9	Do you find my long-winded recaps at the beginning of class annoying or helpful?
Week 10	How do we feel about Taylor Series?
Week 11	FIRST: Go do the course survey. You should find it in your email. Search for FCQ. You do not need to upload anything to Canvas. SECOND: In order to help me while I'm preparing to coordinate Calc I please answer the following questions: What, in your opinion, is the purpose of the Written Homework? What, in your opinion, is the purpose of the WebAssign homeworks?

You must justify your conclusions for each series.

1. [3 Points] Does the series

$$\sum_{n=50}^{\infty} \frac{\sqrt[5]{n^3 - n^2 + n + 1}}{\sqrt[5]{n^{13} - n^2 + 1}}$$

converge or diverge?

2. [3 Points] Does the series

$$\sum_{n=1}^{\infty} (-1)^n \frac{1}{n^{1/100}}$$

converge or diverge?

3. [1 Point] Consider the series

$$\sum_{n=1}^{\infty} \frac{\text{fish}(n^2) \cdot \zeta(n)}{\sigma(n^2 + 1)}$$

for some functions $\text{fish}(n)$, $\zeta(n)$ and $\sigma(n)$ on the natural numbers. Suppose further that

$$\lim_{n \rightarrow \infty} \frac{\text{fish}(n^2) \cdot \zeta(n)}{\sigma(n^2 + 1)} = 0.$$

What can we conclude?