

For part (a) of your reading assignment, please include answers to the following questions from Kline Chapter 6. Please read the questions before you read the chapter. You do not need full complete detail (or even complete sentences unless that's easier) for your answers to these.

Don't forget to include parts (b) and (c) (as described in the syllabus) on what you turn in.

1. How did reading about the history of the calculus change your understanding of the subject? How did it align with your understanding of the subject?
2. In the description of finding area under a curve, Kline says that the approximation to the area given by the sum of the areas of the rectangles increases as the number of rectangles increases, which is definitely correct for the particular curve he's talking about. Is it always the case that increasing the number of rectangles improves the accuracy of the approximation? Why or why not?
3. What did Fermat have to do with the development of the calculus?
4. What did Cavalieri have to do with the development of the calculus?
5. Summarize Newton's contributions to the calculus.
6. Summarize Leibniz's contributions to the calculus.
7. What were the problems with infinite series?
8. What were Berkeley's objections to the calculus?
9. Laplace once wrote "Lisez Euler, lisez Euler, c'est notre maître à tous" (Read Euler, read Euler, he is the master of us all). Respond to this in light of what you read in this chapter.
10. What was your favorite error described in this chapter?
11. Summarize the state of the mathematical world at the end of the 18th century.