

Here are some examples of “Sample Essay questions”. The answers will be a short paragraph along with a figure if appropriate. We can talk about these this afternoon or Friday.

1. In what way is the Fundamental Theorem of Calculus fundamental?
2. What is the idea behind the integral test for convergence/divergence of series? (Hint: A figure or even 2 is appropriate and useful for your answer.)
3. Discuss the statement “Taylor polynomials are just a generalization of the idea of tangent lines.”
4. Give several interpretations of what a derivative means (in Calculus). (Hint: Three should come to mind easily—one is the formal definition, one is the geometric definition, one is the “informal idea”—you may think of more from physics, etc.)
5. What does it mean to say

$$\sum_{n=1}^{\infty} a_n \text{ converges?}$$