Reading Assignment 15:
Newton's Principia

Required Readings:

- Newton [1999, pp. 381-383, 433-436, 511-513]. Please read the author's preface and Lemmas 1-4, and 28 of Book I.
- Domski [2003].

Questions:

- Does Newton think geometry teaches us how to construct line segments and circles? Why or why not? In light of your answer, conjecture what Newton might say about whether geometry teaches us how to construct other curves, like parabolas.
- In your own words, explain what you think Newton might mean by "rational mechanics."
- According to Domski, does Newton accept Descartes' method of classifying which curves are simpler than others? Explain.

Note: Questions 1 and 2 are open-ended: there is no obvious "correct" answer for either question. Some interpretations are better than others, however. Give the first two questions your best shot and provide some textual evidence to support your answers.

References

Mary Domski. The constructible and the intelligible in newton's philosophy of geometry. *Philosophy of Science*, 70(5):1114–1124, December 2003. ISSN 0031-8248. doi: 10.1086/377393.

Isaac Newton. *The Principia : Mathematical Principles of Natural Philosophy*. University of California Press, Berkeley, 1st edition edition, October 1999.