

History of Mathematics

Second Homework:

Due Monday 31 January 2022.

Math 629

25 January 2022

Some of these problems will require you to find other material than just what is in the readings.
To hand in: We are using Gradescope for homework submission.

1. Who was the British mathematician who made the remark at the top of the page? (The Greeks are ‘fellows of another college’.) What do you think he meant by this?
2. Greek mathematics deeply affected at least two US presidents. Research and write about the influence of Euclid and Pythagoras on US Presidents. (There is one US president for each of these Greek mathematicians.) For each, there is at least one very interesting detail/story. Find it, and describe it.
3. What were the three geometric problems of antiquity? (Sometimes called the Three Classical Problems.) For one, describe its origins (at least the best that you can find out). Were any solved by the Greeks (in any fashion)?
4. Do Exercise 1.3.4 in Stillwell. Note that t is the vertical coordinate of the point where the longish secant meets the vertical axis. How is this related to the ‘world’s sneakiest substitution’ from Calculus?
5. Do Exercise 1.4.2 of Stillwell. This is one of the easiest proofs of the Pythagorean Theorem, and is often presented in elementary geometry classes.
6. Do Exercises 2.4.1 and 2.4.2 from Stillwell.
7. Do Exercises 2.5.1 and 2.5.2 from Stillwell.