Math 406 – Fall 2025 – Harry Tamvakis
PROBLEM SET 5 – Due October 9, 2025

Reading for this week: Sections 4, 5 and Fermat's Theorem in Section 6.

Problems

From the textbook: Section 5, Problems #2, 4, 7, 12, 16, 17, 20, Section 6, Problems 2, 15, 18. From the Additional Problems for Section 4, do #4.4 (on page 184) and #4.10 (on page 185).

Extra Credit Problem.

EC) (a) Find a seven-digit number with all its digits different, which is divisible by each of its digits.

(b) Does there exist an eight-digit number with the same property? Justify your answer.