

Fall 2022, Math 522: Preliminary Problem Set 6
Due: Wednesday, October 5th, 2022
The Chinese Remainder Theorem

Preliminary problems. These problems should be completed before discussion.

(P1) Determine which elements of \mathbb{Z}_6 have multiplicative inverses. For each, find the inverse.

(P2) Find a complete set of solutions to the equation $5x + 4 \equiv 2 \pmod{6}$ (it should be infinite!).