Spring 2019, Math 320: Week 12 Preliminary Problems
Due: Thursday, April 25th, 2019
Quotient Rings

Preliminary problems. These problems should be completed before discussion on Thursday.

(P1) List all 9 elements of $\mathbb{Z}_3[x]/\langle x^2 + x + 1 \rangle$, with no repetition.

(P2) Determine whether $[x^4 + x^2 + 1] = [x^5 + 2x^4 + x + 2]$ in $\mathbb{Z}_3[x]/\langle x^2 + x + 1 \rangle$.