

Fall 2018, Math 320: Week 4 Preliminary Problems
Due: Thursday, September 20th, 2018
Introduction To Rings

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

(P1) List all of the requirements for $(F, +, \cdot)$ to be a field (i.e. from the definition). Do not use the word “ring” anywhere in your list. Write out the meaning of words like “commutative” and “associative” if you use them.

(P2) Write “(I)” next to each item above that is needed to ensure $(F, +)$ is an integral domain (adding additional axioms if necessary).

(P3) Write “(R)” next to each axiom item that is needed to ensure $(F, +, \cdot)$ is a ring.