

Spring 2021, Math 522: Preliminary Problem Set 2
Due: Thursday, February 4th, 2021
The Fundamental Theorem of Arithmetic

Preliminary problems. These should be submitted to Gradescope before Thursday discussion.

(P1) Write the complete mathematical definition for “ $p \in \mathbb{Z}$ is prime”, as well as one mathematically equivalent statement from Tuesday’s lecture.

(P2) Find the prime factorizations of 60 and 126 *without* using a calculator.

(P3) Find as many factorizations of 12 as you can, *including* those we usually consider “the same” (e.g. $12 = 2 \cdot 2 \cdot 3$, $12 = 2 \cdot 3 \cdot 2$, and $12 = (-2)(2)(-3)$).