Spring 2021, Math 522: Preliminary Problem Set 1 Due: Thursday, January 28th, 2021 The Division Algorithm and Greatest Common Divisors

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

(P1) Write a complete mathematical definition of (a, b), the greatest common divisor of $a, b \in \mathbb{Z}$.

(P2) Find $q, r \in \mathbb{Z}$ so that

$$105 = 11q + r$$

with $0 \le r < 11$, as in the division algorithm.