

# Class Lecture Notes for Math 305, Spring 2022

Dr Holmes

January 11, 2022

These are notes on what I say in class in Math 305.

## 1 Tuesday, January 11, 2022

Administrative preliminaries.

I'm providing an outline of today's lecture which I will fill in in more detail probably on the 12th.

I discussed the definitions of  $\mathbb{Z}$ ,  $\mathbb{N}$ ,  $\mathbb{Z}^+$ .

I stated a set of axioms for the integers which I will include here (based on the axioms in the Math 287 book with two alternative approaches to order).

I stated the Well-Ordering Principle and proved two sample theorems, "each positive integer is either even or odd", and "there is no integer strictly between 0 and 1".

Watch this space: this will all be filled out in much more detail, maybe today, more likely tomorrow.