

MATHEMATICS 300 — FALL 2019

Introduction to Mathematical Reasoning

HOMEWORK ASSIGNMENT NO. 1, DUE ON WEDNESDAY, SEPTEMBER 11

- ***Recommended problems for you to do:*** All the problems in Section 2.9 of the notes (that is, Problems 1 to 16).
- ***Homework problems for you to hand in:*** Problems 1, 2, 3, 8, 10, 12, 13, 16.

NOTE: Problems 8 and 16 (part 3) are challenging, because they are very easy and very hard at the same time. They are easy in the sense that once you figure out how to do the problem the proof is trivial, just a few lines. And they are hard, because you have to figure out how to do the problem.

HINT FOR PROBLEM 8: use the result of Problem 13.

HINT FOR PROBLEM 16: $m^2 - n^2 = (m + n)(m - n)$.