

Welcome to Math 1181H. Yes, this is *math*—but what’s math? If we look up *μαθ* in a Greek-English lexicon:

μάθημα, ατος, τό, (μαθεῖν) that which is learnt, a lesson. 2. learning, knowledge :—in pl., τὰ μαθήματα mathematics. Hence μαθηματικός, ή, όν, fond of learning. II. belonging to the sciences, esp. to mathematics : ή μαθηματική (sub. επιστήμη), mathematics : ό μαθηματικός a mathematician. μάθησις, ή, (μαθεῖν) the act of learning, acquiring information. 2. desire or power of learning. μαθήσομαι, fut. of μαθάνω. μαθητός, α, ον, verb. Adj. of μαθάνω, to be learnt. II. neut. μαθητέον, one must learn. μαθητεύω, f. σω, to be a pupil or scholar. II. trans. to make a disciple of one, instruct. From μαθητής, ού, ό, (μαθεῖν) a learner, pupil, Lat. discipulus : a disciple.

Indeed, mathematics epitomizes learning, but this learning comes at the price of discipline. This is the first of 16 homework assignments to provide this discipline.

Show your work

When you “solve” a problem, the goal is not merely to give a correct answer! Each problem has a story, and you should *tell the story* by clearly explaining your argument.

The four boxed problems will be graded

Even if you don’t do all the assigned problems (though you should!), the four boxed problems will be graded.

Assigned Problems

From §1.5 (starting on page 22), do problems 5, 6, 7, 17, 27, 35.

From §1.6 (starting on page 30), do problems 2, 3, 5, 7.

From §1.7 (starting on page 37), do problems 3, 5, 6, 7, 9, 11, 19, 21.

From §2.3 (starting on page 58), do problems 5, 17, 18, 21, 23, 39.