When I first started teaching an introduction to proofs course in 1978, I thought that having an entire course that carefully
developed the basics about set properties, functions, and relations would solve the problem of student unpreparedness
for courses like abstract algebra and real analysis. Although I believe that even the initial offering of the course was
helpful, over the years I’ve made many changes. Most have been in response to discoveries that my assumptions about
what students would find easy were contradicted by their work. The majority concern student difficulties with logic and
language, especially in connection with quantified statements. A small example: Relatively recently I became aware that
when I ask students to use other words to explain the meaning of the sentence “The negative of any rational number is
rational,” a surprising number respond by writing something meaningless. Although they usually express dissatisfaction
with what they wrote, they genuinely don’t seem to understand what the sentence means. In this talk I will share many
of the discoveries I’ve made and the resulting changes in the course. I will also discuss the problem of convincing students
that it is important to use careful language when writing proofs and disproofs. (Received September 17, 2013)