

**MATH 300. INTRODUCTION TO  
MATHEMATICAL REASONING.  
FALL 2015.  
WEEK 4 (LECTURES 6,7) PROOFS**

1. Reading: Sections 1.4,1.5.
2. Home assignment (Due Monday, September 28) (to submit).
  - Sect.1.4: 4,5(a,b,c,e,i), 7(a,c,h,i,l),8a,9(a,d).
  - Sect.1.5:3b,d,g),4(a,c),4(a,c).
  - Extra problem: 1)All people make some number of handshakes in their life. Prove that the number of people with odd numbers of handshakes is even.
  - 2) Prove that diagonals at a rectangular are equal. Write down the complete logical structure of the proof with all intermediate propositions and theorems.