

**MATH 300. INTRODUCTION TO
MATHEMATICAL REASONING.
FALL 2015.
WEEK 6,7 (LECTURE 10-13).
PREDICATS AND QUANTIFIERS .**

1. Reading: Sections 1.3,1.6.
2. Home assignment (Due Monday, October 19) (to submit).
Sect.1.3: $2(c,d,f,g,n,o), 3(\text{all}), 10(b,c,g,h), 13(\text{all})$.
Sect.1.6: $1(g,h,i), 3, 4(b,c,f,g), 5(a,b), 6(a,d,e)$.

Extra problem: Alice met 3 sages who argued who is the smartest of them and asked her to be a judge. Alice took from her bag 3 black caps and 2 white ones. Alice asked them to close their eyes and put on all them black caps. She took white caps back to her bag, asked sages to find what color has their cap. Everybody could see the cap on other ones but not on himself. After a short time all three simultaneously shouted : “My cap is black!”. Alice said: “Smartest sages, you are equally smart!”

How did they guess? Why it took some time before they answered?