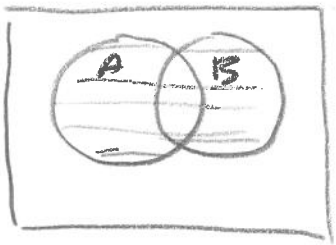
Mathematics 300

Quiz 33 **Name:** Key

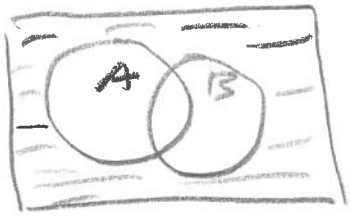
You must show your work to get full credit.

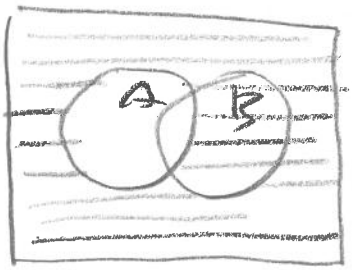
1. Draw the Venn diagrams for $(A \cup B)^c$ and $A^c \cap B^c$. (By DeMorgan's Law they should be equal.)



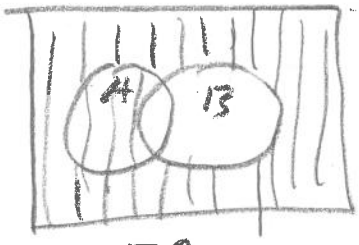
$A \cup B$

take complement



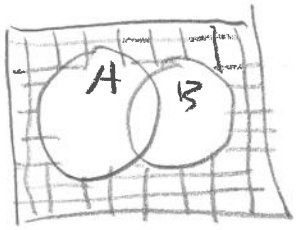


A^c



B^c

/



$A^c \cap B^c$

2. Draw the Venn diagram for $A \cap B^c \cap C$. This is elements that are in both A and C, but not in B