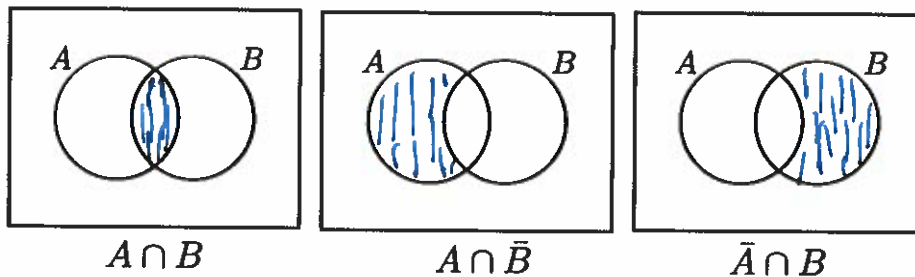


MTH 357/657

Quiz #1

1. In the following three diagrams, shade in the region corresponding to the set indicated below the figure.



2. The event that "A or B but not both" will occur can be written as

$$(A \cap \bar{B}) \cup (\bar{A} \cap B).$$

Express the probability of this event in terms of $P(A)$, $P(B)$, and $P(A \cap B)$. You do not need to prove anything. You can simply write down what you think the answer is based off of the Venn diagrams.

$$P((A \cap \bar{B}) \cup (\bar{A} \cap B)) = P(A) + P(B) - 2P(A \cap B)$$