

Show

1.  $P(A^c) = 1 - P(A)$

2.  $P(\emptyset) = 0$

3. If  $A \subset B$  then  $P(A) \leq P(B)$ .

4.  $P(A \cup B) \leq P(A) + P(B) - P(A \cap B)$  *Addition Rule*

5. Suppose A, B, and C are events. Express the following events using set notation.

a) None of the events occur.

b) All of the events occur.

c) Exactly two of the events occur.

d) At least one of the events occurs.