



**Probability Union, Intersection,  
Complement - Set Operation to  
Description**

**1**

This set operation gives  
the probability of what?

$$P(A \cap B)$$

A Both A and B happening

B Event A happening, given that  
B has happened

C Either A or B happening

D Event A not happening

**2**

This set operation gives  
the probability of what?

$$P(A \cup B)$$

A Event A not happening

B Either A or B happening

C Event A happening, given that  
B has happened

D Both A and B happening

**3**

This set operation gives  
the probability of what?

$$P(A')$$

A Both A and B happening

B Event A happening, given that  
B has happened

C Either A or B happening

D Event A not happening