In Class Questions - May 6th

1. A study by Tourism Ontario revealed that 89% of the tourists going to Toronto visit the CN Tower, 83% visit Sky Dome and 78% visit both. What is the probability that a tourist will visit
a. at least one of these magnificent attractions?
b. exactly one of these magnificent attractions?

2. Suppose A and B are events where $P(A^c) = 0.53$, $P(B) = 0.46$, and $P\ (A \text{ and } B)^c = 0.83$. Compute
a. $P\ (A \cup B)$ b. $P(AB^c)$ c. $P(A^cB)$

3. The probability that house sales will increase in the next 3 months is estimated to be 0.07. The probability that the interest rates on housing loans will go up in the same period is estimated to be 0.05. The probability that house sales or interest rates will go up during the next 3 months is estimated to be 0.08. What is the probability that both house sales and interest rates will increase during the next 3 months?

4. Given that $P\ (C^c) = 0.86$, $P\ (B \cup C) = 0.39$, $P\ (A \cup C) = 0.48$, $P\ (A \cup B \cup C) = 0.61$. The event C is disjoint from events A and B
Compute a. $P\ (A^c \cup B^c \cup C)$ b. $P\ (A^c \cap B \cap C^c)$

TRUE/FALSE Questions

1. Assume you roll a 6-sided die. The probability of rolling a 2 or a 6 is $\frac{1}{6}$
2. Assume you roll a 6-sided die. The probability of rolling a 2 or a 4 or a 6 is $\frac{1}{6}$
3. Suppose A and B are events where $P(A) = 0.23$, $P(B) = 0.16$, then $P(A \cup B)=0.39$