MATH 10B with Prof. Stankova | Student:
Section #208 ; time: 2-3:30pm | SID:
GSI: Ninh DO | **Quiz 7 Solution** | Tue 3/12/19

True/False - No explanation needed. (1pt for correct, 0pt - no answer, -1pt - incorrect)

1. $P(B|A) = 1 - P(B|\bar{A})$. True/False
   False. We have $P(B|A) = 1 - P(\bar{B}|A)$ but not the other.

2. Roll two dies. Let X be the first die rolled, Y be the minimum of two dies. X and Y are independent. True/False
   False. Look at prob 2 ws 12.

Problems - Need justification. No justification means **zero**!

1. (10pts) Draw 10 cards from a deck of cards. Let X be the number of diamonds.
   a) Identify the name of distribution of X.
   b) Identify the range of X.
   c) Write the formula for PMF of X.
   d) Find P(X = 6).

   a) Hypergeometric distribution
   b) $\{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
   c) $P(X = k) = \dfrac{C(13, k) * C(39, 10 - k)}{C(52, 10)}$
   d) $P(X = 6) = \dfrac{C(13, 6) * C(39, 4)}{C(52, 10)}$