MATH 10B with Prof. Stankova
Section #208 ; time: 2-3:30pm
GSI: Ninh DO

Quiz 5

Student:
SID:
Tue 2/26/19

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

1. The probability of the event A or the event B occuring is upper bounded by the maximum of the probability of the event A and the probability of the event B, i.e.

$$P(A \cup B) \leq \max(P(A), P(B))$$

   True/False

2. The probability of the event A occuring is always less than or equal to the probability of the event A occuring given that the event B occurs, i.e. $P(A) \leq P(A|B)$. True/False

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

1. (10pts) A family has 5 kids in a row. The probability of having a boy is 0.4. Calculate:
   (a) The probability of 3 boys and 2 girls.
   (b) The probability of 2 boys given at least 1 girl.
   Hint: You do not need to simplify your answers.