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

Quizz 2

Student:
SID:
Tue 2/5/19

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

1. $P(n,r) = P(n, n-r)$. True/False
2. A number of ways to arange n objects is $\frac{n!}{(n-r)!}$, where r is the number of the non-distinct objects. True/False

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

1. (5pts) Show that in a group of 16 people, all of whom are female, male or non-binary, at least one of the following must be true:
   (a) At least 5 are female
   (b) At least 4 are male
   (c) At least 9 are non-binary

   Hint: $16 - 4 - 3 = 9$

2. (5pts) How many ways are there to arrange 4 men and 7 women standing in a line so that no two men stand next to each other?