MATH 10B with Prof. Stankova

DIS 106; TTh 9:30~11:00 GSI: Seewoo Lee

Quiz 3

Student: SID:

Tue 2/12/19

True/False - No explanation needed. (2pts)

- 1. Some algorithm does not lead to the desired output. True/False
- 2. The number of ways to put b distinct balls into u identical boxes is same as the number of ways to put b identical balls into u identical boxes, where we only count the cases that each box has at most one ball in it. True/False

Problems - Need justification. No justification means zero!

1. How many solutions are there to the equation $x_1+x_2+x_3+x_4+x_5=20$ where x_1, x_2, x_3, x_4, x_5 are nonnegative integers and $x_1 \geq 4$? (5pts)

2. How many ways to put 10 distinct balls into 6 distinct bins where each bin has at least one balls? (Your answer may be in terms of Stirling numbers.) (5pts)