M362K (57055), Homework #6 Instructor: Ravi Srinivasan

Due: 12pm, Wednesday, Mar. 10

Note: Please include your name and UT EID on the front page. To get credit, please show your work and not only your final answer. Please keep answers organized in the same order the problems have been assigned.

Complete the following problems from ``Probability,'' by Jim Pitman:

--Standard deviation and normal approximation-* pp. 202-206, #2,4,8,14,16,20,24(a,b)(no need to do part (c))
[Note: To clarify, in #16 the net gain in one game is simply the number on the ticket you draw.]
* pp. 250-258, #6,20

--Discrete distributions-* pp. 217-220, #2,4,18
[Note: For #18, write G = 2X, where X has geometric(p^2 + q^2) distribution. Why?]
* pp. 250-258, #2,26
[Note: For #2(e), read Example 5, the collector's problem, on p. 215.]

--Extra credit (2 points)--* p. 255, #30