EE 381 Homework 2 Part 1

Name, I.D. #, and Date: _____

Instructions: Attempt each exercise and show your work. You can attach pages to your submission. Submit this part of homework 2 with the additional parts of homework 2 on Monday, February 17. You may want to make copies of your work.

An urn contains six chips numbered 1 through 6. Three are drawn out. What outcomes are in the event "Second smallest chip is a 3"?

If $P(A) = \frac{1}{3}$, $P(B) = \frac{1}{2}$, and $P(A \cup B) = \frac{3}{4}$ find the following

$P(A \cap B)$

$P(A^c \cup B^c)$

$P(A^c \cap B)$

The superscript c denotes the complement of the set.

The sample space for an experiment has three outcomes, all equally likely:

$S = \{(1, 2, 0), (2, 1, 3), (4, 1, 1)\}$.

Define the random variable (RV)

$Y = Y(s) = Y(a, b, c) = a + b + c$.

Find the probability mass function of Y.