ECE 341 - Homework #3

Dice Games and z-Transform. Due Friday, May 23rd

Farkle

1) Compute the odds or rolling a 3 of a kind, 3 of a kind in Farkle

dice = xxx yyy

2) Compute the odds of rolling 3 of a kind in Farkle.

dice = xxx abc

z-Transforms

Assume X and Y have the following z-transforms

$$X = \left(\frac{1}{2}\right)\left(\frac{z+1}{z}\right) \qquad\qquad Y = \left(\frac{1}{3}\right)\left(\frac{z^2+z+1}{z^2}\right)$$

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The card game *bridge* uses a 52-card deck. Each person is dealt 13 cards for their hand.

1) How many different hands are possible? (order doesn't matter)

2) What is the probability of having 7 cards of one suit in your hand?

3) What is the probability of having all 4 Aces in your hand?

4) Compute the odds of a flush in 5-card stud.

5) Compute the odds of a flush in 5-card draw. Assume you go for a flush if you have four cards of one suit in your opening hand (and draw one card).

6) Determine the odds of a flush using Matlab and a Monte-Carlo simulation