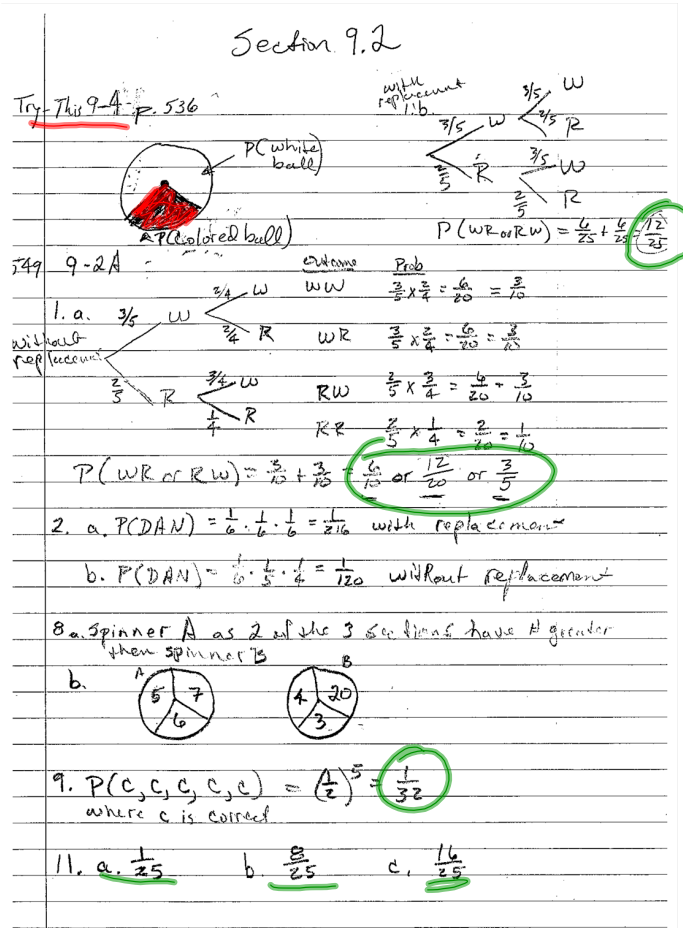
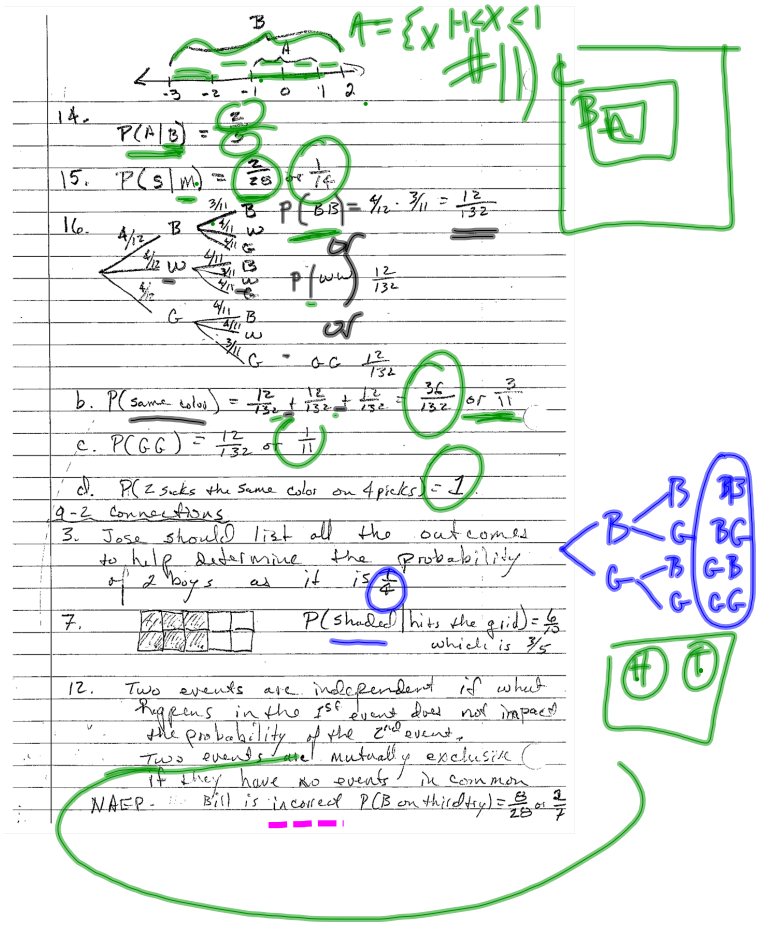
9/4/12

Math 304

Discuss - Activity 7: Paper-Scissors-Rock Lab





Sections 9-3 Simulations & 9-4 Odds 9/4

1. If the probability of rain is $\frac{1}{5}$, explain how you could simulate the probability of getting two rain days in a row. Through the use of:

a. A die.

Let 1 = rain, (2,3,4,5) = no rain, 6 roll again

Trail 1: 2, 4, 3, 2, 5, 3, 5, 1, 5, ... 11

b. Random-digit table (p. 558)

Let 0 & 1 = rain, 2, 3, ... 9 = no rain

4

36422	93239	76046	81114	77412
78496	47197	37961	67568	14861
96384	59596	05081	39968	80495

28, . . .

2. If the probability of snow is $\frac{1}{5}$ then what are the odds in favor of snow?

part-to-whole

part-to-part

1 : 4 sum = 5

3. If the odds in favor of the 49ers winning the NFC championship over the Giants is 2:1 then what are the odds against the 49ers winning?

win lose

lose 1 : 2 win

4. If you have three true or false questions, what are the odds in favor of correctly guessing the answers to all three true/false questions?

$P(C, C, C) = \left(\frac{1}{2}\right)\left(\frac{1}{2}\right)\left(\frac{1}{2}\right) = \frac{1}{8}$

odds in favor 1 : 7 total = 8

5. Describe how a random-digit table can be used to pick 30 students from a school with 500 students.

Part of a Table of Random Numbers

61424	20419	86546	00517
90222	27993	04952	66762
50349	71146	97668	86523
85676	10005	08216	25906
02429	19761	15370	43882
90519	61988	40164	15815
20631	88967	19660	89624
89990	78733	16447	27932

Let 0-499 be a different student

Assign students a unique number from 1 to 500.

Use the first three digits in each column. Randomly pick a starting group and mark off 30 blocks.

If there are numbers greater than 500 select addition blocks until 30 different numbers between 1-500 are identified.

These will be the students who will be going to the Rose Bowl.

Activity 8: Simulate It (Due THURSDAY

Robin hits the target if you roll 1 or 2, if 3-6 then it Robin misses.

Marian hits the target with a 1 or 2, if 3, 4, 5 she misses, and if it is a 6 roll again(don't count these).
Continue each trial until someone hits the target.

ex.

Trial	Winner	# of Shots
1	Robin	1111
2		
3		
4		
:		
.		
30		

1. What is the probability that Robin wins?
2. What is the average number of shots for your 30 trials?

Activity 8: Simulate It
Country Music Trivia Quiz Card

In place of rolling a die use the Cereal Box simulation online
Set Number Animal Types at 4 and run 20 trials recording your results in a table

Trial	
1	
2	
:	
.	
20	