Questions on Homework

(6)

Winnings	\$4	\$0
prob	$\frac{28}{90}$	$\frac{62}{90}$

$P(B) \cdot P(B) + P(O) \cdot P(O) + P(G) \cdot P(G)$

$\frac{2}{10} \cdot \frac{1}{9} + \frac{5}{10} \cdot \frac{4}{9} + \frac{3}{10} \cdot \frac{2}{9}$

$\frac{28}{90}$

(8)

$\$4.35 = 2(.25) + 3(.4) + x(.15) + 8(.20)$

$4.35 = .50 + 1.20 + .15x + 1.60$

$4.35 = 3.30 + .15x$

$\frac{1.05}{.15} = .15x$

$\$7 = x$

Oct 5-10:07 PM

Review Problems

1. A survey is conducted and 38 out of 68 people said they have a pet. How many people out of 26,000 could you expect to have a pet?

a. 38
b. 26,000
c. 14,529
d. 15,429

$\frac{38}{68} \cdot 26000$

Oct 2-6:46 PM

2.

# owned	0	1	2	3	4	5
probability	.02	.26	.37	.19	.12	.04

What is the expected number of vehicles in a typical household?

$$0(.02) + 1(.26) + 2(.37) + 3(.19) + 4(.12) + 5(.04) =$$

$$2.25 \text{ vehicles}$$

Oct 2-6:17 PM

Learning Targets

- Understand how to use a random number table
- Properly assign digits to simulate a random situation
- Perform a simulation using a random number table to estimate the probability of an event

Oct 5-9:12 PM

Simulation

The imitation of chance behavior, based on a
probability model that accurately reflects the situation.

* Saves time
* Saves money
* Saves lives

Sep 29-9:44 PM

Simulation Steps

Step 1: Set up a probability model to show
the situation (if possible).
Step 2: Assign digits to represent outcomes
(know if we need to use 1, 2 or 3 digits).
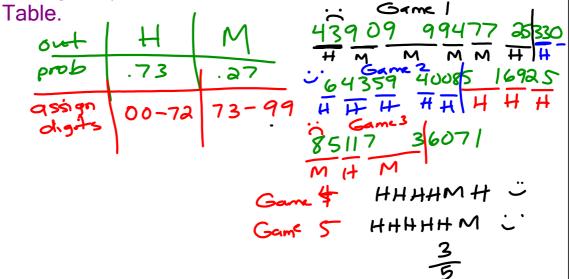State which numbers you will ignore (if any).
Step 3: Choose a line from the random
number table to start on (use the line given).
Step 4: Perform your simulation.
Step 5: Summarize your results.

Oct 5-8:59 PM

Ex. Abigail makes 73% of her free throws according to this season's stats. What's the estimated probability that Abigail will make at least 5 out of 6 free throws in the championship game? Perform 5 repetitions (simulate 5 championship games where she gets 6 free throws in each game). Use Line 127 on the Random Number Table.

out	H	M
prob	.73	.27
assign digits	00-72	73-99

Game 1
43909 99477 25330
H M   M   M M   H H

Game 2
64359 40085 16925
H H H   H H   H H H

Game 3
85117 36071
M H M   M

Game 4   HHHHMH ☺

Game 5   HHHHHM ☺

$$\frac{3}{5}$$

Oct 5-9:08 PM

Ex. What's the chance if a coin is flipped 10 times in a row that a run of 3 or more tails will occur? Get an estimated probability using simulation (simulate 10 flips 2 different times). Use Line 101 on the Random Number Table.

out	H	T
prob	.5 .50	.5 .50
assign digits	0-4 00-49	5-9 50-99

H H   H   T
19223 95034 ☺
H T H H H T T H H H

05756 28713 ☺
H T T T T H T T H H

$$\frac{1}{2}$$

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4

Practice Assigning Digits to use the Random Number Table

40% of students at CPHS buy French fries at lunch.

FF   NFF
.4   .40   .6   .60
0 - 3   00-39   4-9   40-99

38% of all Republicans say they would vote for Donald Trump if the presidential election were held today.

D+   NDT
00 - 37   38 - 99

85%
40% of CPHS students are on the honor roll.

HR   NHR
00-84   85-99

Joe Mauer's chance of getting a hit (batted .335 this season)

H   NH
000 - 334   335-999

Oct 5-9:14 PM

Most Likely to Win the Super Bowl

Team	P Patriots	W Packers	L Lions	J Jets
Probability	.35	.29	.24	.12
assign digits	00 - 34	35 - 63	64-87	88-99

Simulate the results of asking 10 fans who they think will win the Super Bowl this year. Use Line 115 on the random number table.

61041   77684   94322   24709
W   P   P   L   L   J   P   P   W   P

$$\frac{5}{10} = \frac{1}{2}$$

Sep 29-9:53 PM

Homework:

Section 3.3   #1-3, 5, 8, 9

Learning Targets

- Understand how to use a random number table

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