Monday, April 29, 2019

(circled) 20% Nike

$P(9) = \dfrac{1}{10}$

$\dfrac{2}{10} \rightarrow 8, 9$ $\div 5$

$\dfrac{7}{80}$

- Warm-up
  - Given a random number table similar to the one below, estimate the probability of choosing a 9 from the set of numbers

6 sided die

1, 2, 3, 4, 5, 6

80777	84395	69563	86280
69273	72532	78340	36699
72944	96463	63533	24152
88606	61406	38757	70657

Apple → 45%

01 - 45 = Yes

46 - 99 + 00

- Simulation Lab

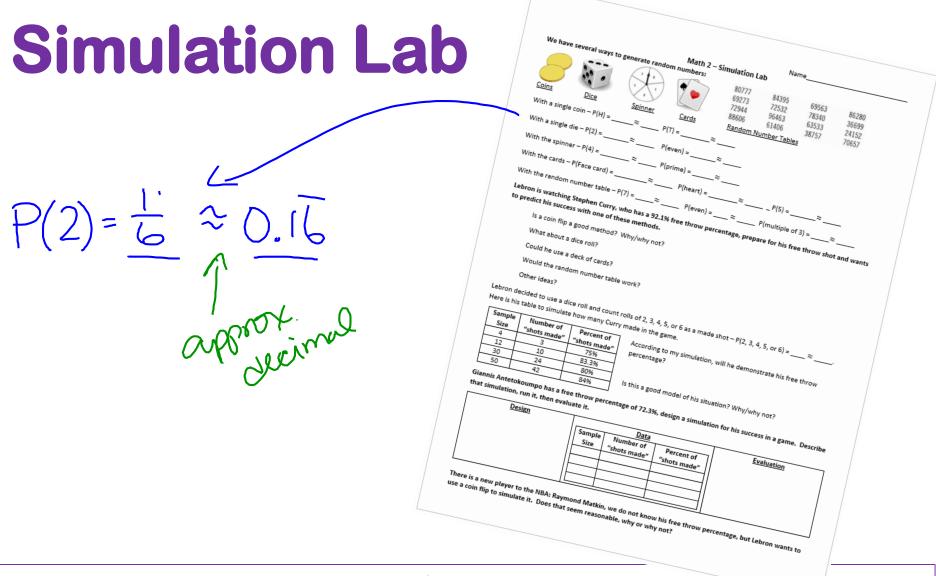### <u>Objectives</u>
Content: I will <u>analyze</u> **simulations** to <u>determine</u> if they will accurately **simulate** a situation.
Social: I will <u>participate</u> with my group members to work with **simulations**.
Language: I will <u>read</u> directions carefully to **design**, **run** and **analyze** a **simulation**.

Simulation Lab

$$P(2) = \frac{1}{6} \approx 0.1\overline{6}$$

approx. decimal

Math 2 – Simulation Lab Name_____

We have several ways to generate random numbers:

Coins Dice Spinner Cards Random Number Tables

80777	84395	69563	86280
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With a single coin – P(H) = _____ ≈ _____   P(T) = _____ ≈ _____

With a single die – P(2) = _____ ≈ _____   P(even) = _____ ≈ _____

With the spinner – P(4) = _____ ≈ _____   P(prime) = _____ ≈ _____

With the cards – P(Face card) = _____ ≈ _____   P(heart) = _____ ≈ _____

With the random number table – P(7) = _____ ≈ _____   P(even) = _____ ≈ _____   P(5) = _____ ≈ _____   P(multiple of 3) = _____ ≈ _____

Lebron is watching Stephen Curry, who has a 92.1% free throw percentage, prepare for his free throw shot and wants to predict his success with one of these methods.

Is a coin flip a good method? Why/why not?

What about a dice roll?

Could he use a deck of cards?

Would the random number table work?

Other ideas?

Lebron decided to use a dice roll and count rolls of 2, 3, 4, 5, or 6 as a made shot – P(2, 3, 4, 5, or 6) = _____ ≈ _____.

Here is his table to simulate how many Curry made in the game.

Sample Size	Number of "shots made"	Percent of "shots made"
4	3	75%
12	10	83.3%
30	24	80%
50	42	84%

According to my simulation, will he demonstrate his free throw percentage?

Is this a good model of his situation? Why/why not?

Giannis Antetokoumpo has a free throw percentage of 72.3%, design a simulation for his success in a game. Describe that simulation, run it, then evaluate it.

Design	Data			Evaluation
	Sample Size	Number of "shots made"	Percent of "shots made"	

There is a new player to the NBA: Raymond Matkin, we do not know his free throw percentage, but Lebron wants to use a coin flip to simulate it. Does that seem reasonable, why or why not?

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