

Wednesday, May 8, 2019

	Eat Breakfast	Skip Breakfast	Totals
Students: ages 10-13	40	14	54
Students: ages 14-17	12	24	36
Totals	47	43	90

- Warm-up
 - Using the following table

- Joe says that $P(\text{Eat or ages 10-13})$ is $\frac{47}{90} + \frac{54}{90} = \frac{101}{90}$. Do you agree? explain. no

$$\frac{47}{90} + \frac{54}{90} = \frac{101}{90}$$

$$\rightarrow - \frac{40}{90} = \frac{61}{90}$$

$P(\text{eat} | 10-13)$
↑
given

- Julie says that $P(\text{Eat given ages 10 - 13})$ is $\frac{40}{47}$. Do you agree? explain.

$$\frac{40}{47}$$

$$\frac{40}{54}$$

- Egg Roulette

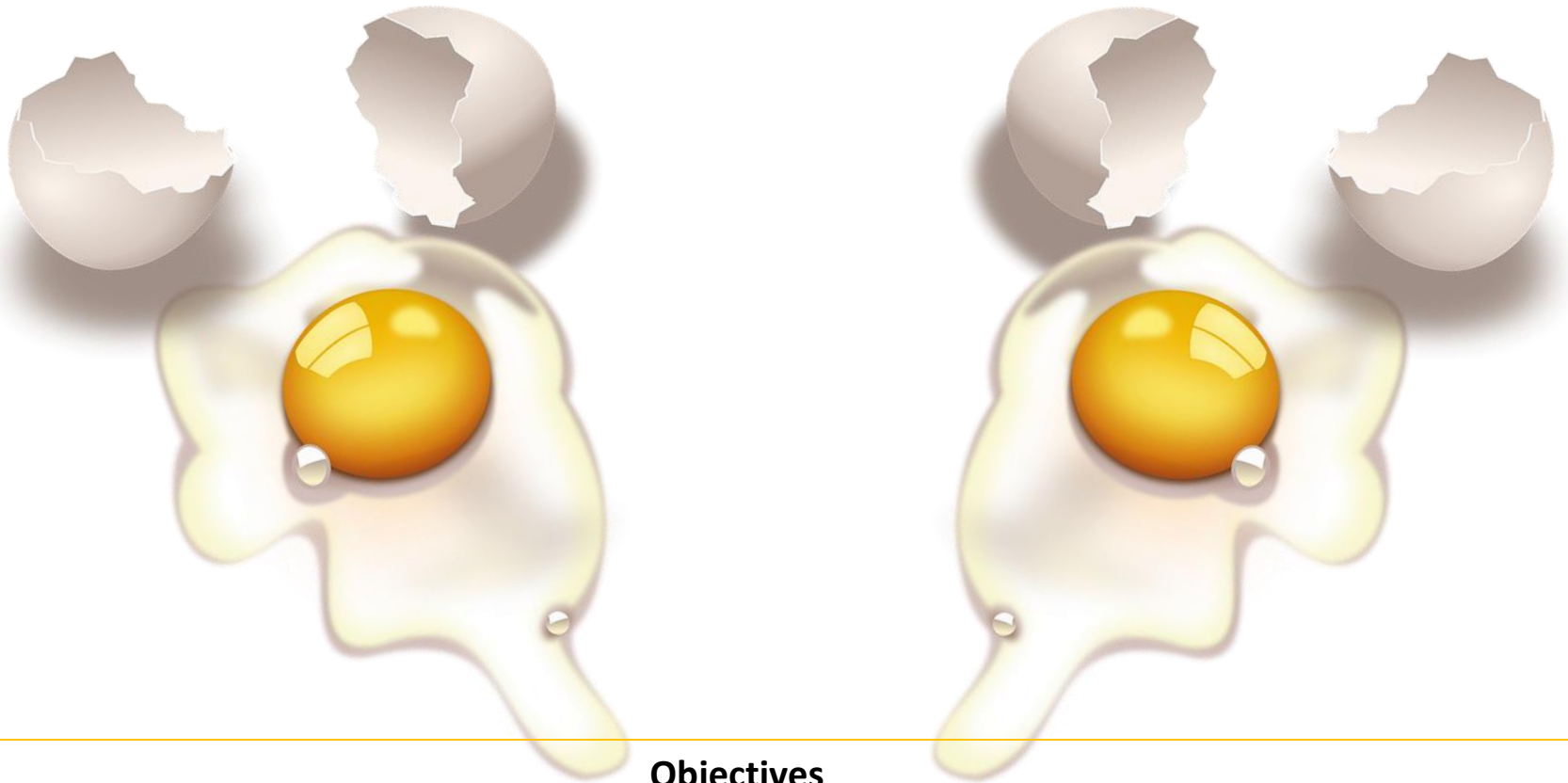
Objectives

Content: I will apply **conditional probability** and **The Law of Large Numbers** to examine situations.

Social: I will participate in class activities.

Language: I will read questions carefully and define **The Law of Large Numbers** in my own words.

Egg Roulette



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Conditional
Probability changes
each time

Independent
Probability stays
the same each time

Review the rules



1 egg at a time
- cannot shake
- no "put backs"

4 rows
8 boiled

First person to 2 eggs loses

Guest always goes first

Objectives

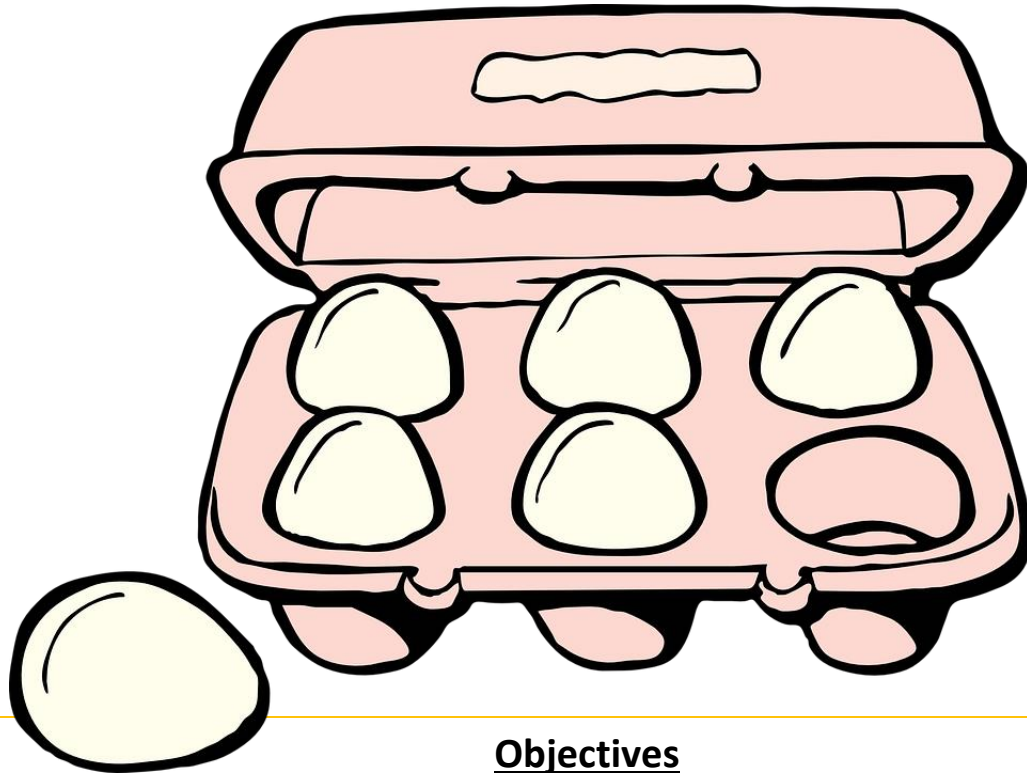
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Let's Play

8



Ben 23

Syv 35

Xander 81

Mason 70

Malynn 27

Jaette 57

Katie 29

Isily ~~16~~ 16

Andrew 48

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Brain Break

Line - up

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Gather Data

Last name
First
guest

Raw = Gray
Boiled = white



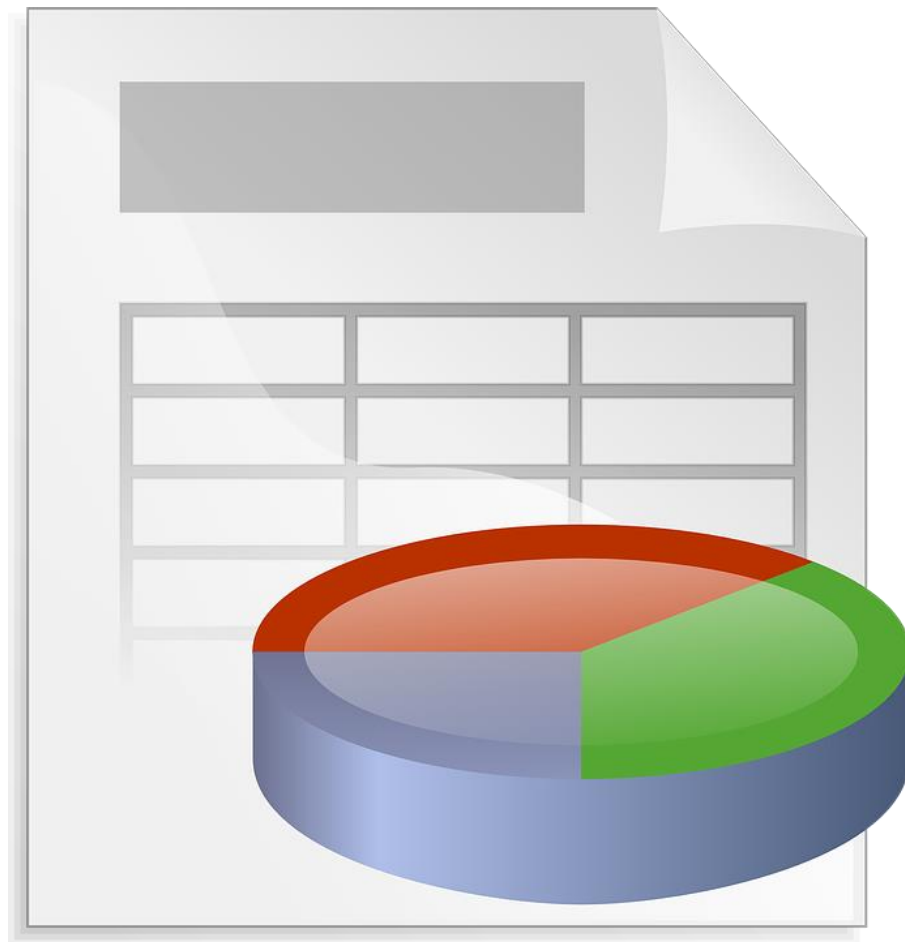
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Combine & Analyze Data



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Law of Large Numbers

flip a coin \rightarrow theoretical $P(T) = 50\%$

H H H H

10 coins all H

100 coins \rightarrow 50 should

1000

bigger
sample, the
closer to
what
"should
be"

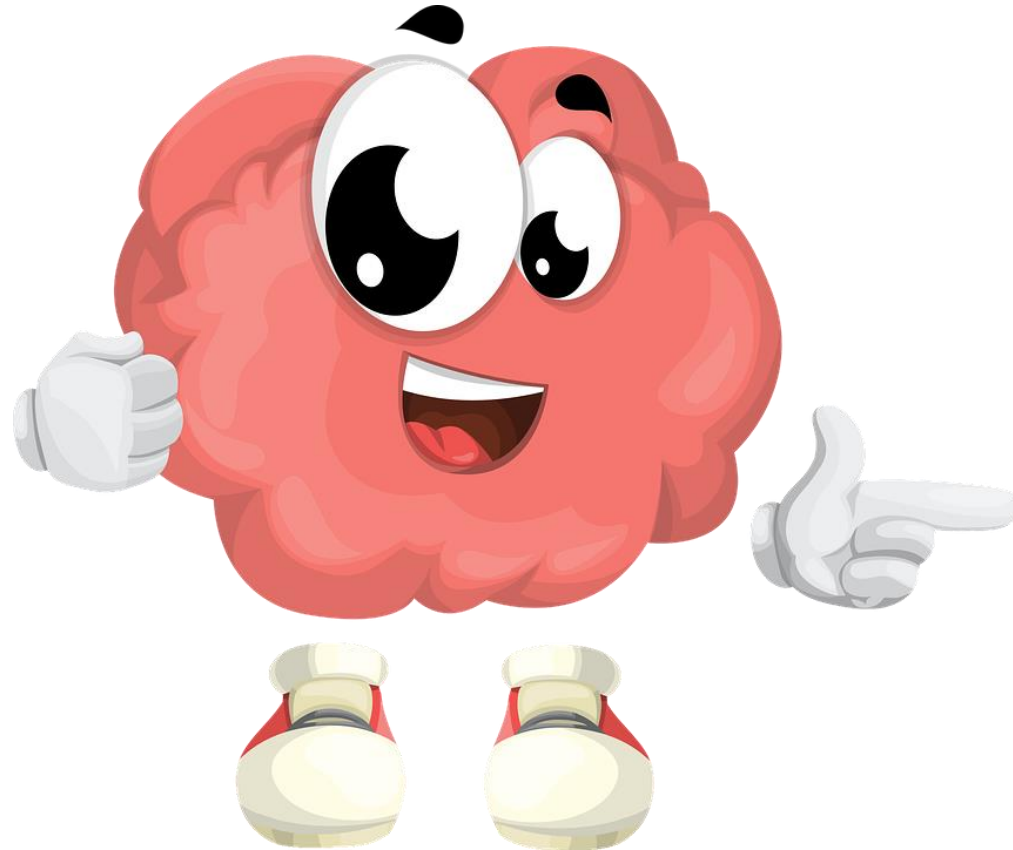
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BRAIN BREAK



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Part II

Extra
Credit



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