DAY ONE

Name _____

TikTok discussion questions

1. What are some ways math is all around us shown in the video?

2. As a group, can you come up with at least 3 more ways math is used around us?

Math puzzles

Use the space below for scrap paper and to write down your answer to brownie and/or soduko puzzle. All I ask is that you try it and come up with a possible solution. This will be graded on completion. :)

Sudoku

The goal when filling out a sudoku is to enter a number from 1 to 9 in each box of the puzzle. Each row, column, and outlined 3×3 region must contain each number only once.

Example I

Sudoku Puzzle - Easy

9	4	1	8					2
	6	8	4	5	2			3
		5		6	9		4	8
6			5		7	8		4
8	5	7		2	4	9	3	1
2		4		3	8	5	6	
4		6	7	9	1	2		
1		9	2		5		7	6
		2				4	1	9

www.sudoku-puzzles.net

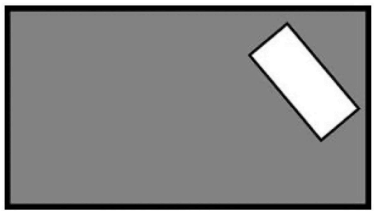
Mathematical exploration begins with questions. So I'm scattering a few puzzles throughout this book. No pressure—you can skip them if you wish, or think about just the ones that seem enticing. Hints and solutions can be found in the back, but before you look there, I recommend playing around with each problem.

DIVIDING BROWNIES

A father bakes brownies in a rectangular pan as an after-school snack for his two daughters. Before his daughters get home, his wife comes along and removes a rectangle from somewhere in the middle, with the sides of the rectangle not necessarily parallel to the sides of the pan.

How can he make one straight cut and divide the remainder of the brownies evenly between his two daughters so that they get the same area?

A version of this puzzle was featured on the NPR show *Car Talk*.[a]



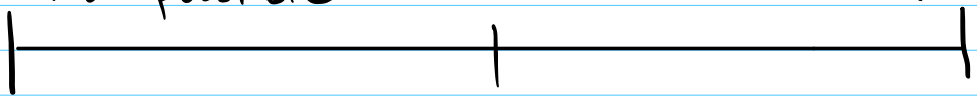
DAY TWO!!

Movement and Probability

Probability: Chance that an event will occur. Falls between 0 and 1.

0 = Not possible

1 = Guaranteed



1/2 = Not unlikely or likely (50/50)

Example #1: Let's say you have a bag with 4 moons and 1 star. What is the probability that you pick a moon out of the bag?

Example #2: Let's say there now are 300 total pieces in the bag. Using the probability from above (4/5). Find how many moon pieces are in the bag.

1. Wheel of Fortune

Each person gets 3 attempts

	Player 1	Player 2	Player 3	Player 4
Attempt 1				
2				
3				

Put a ✓ or X if you complete or fail the task.

(1) What is the probability that your group completed the task? Write your answer as a fraction and a percentage.

(2) Let's say your team took 65 attempts at this challenge. Using the probability from above... Find how many times your group completes the challege out of 65.

(3) What is the probability that your group failed the task? Write your as a fraction and a percentage.

To get a 4

2. Dice shoulders

Each person has 2 attempt

	Player 1	Player 2	Player 3	Player 4
Attempt 1				
2				

Put a ✓ or X if you complete or fail the task.

(1) What is the probability that your group completed the task? Write your answer as a fraction and a percentage.

(2) Let's say your team took 75 attempts at this challenge. Using the probability from above... Find how many times your group completes the challege out of 75.

(3) What is the probability that your group failed the task? Write your as a fraction and a percentage.

To get a 4

3. Keepie Uppie

* Each person has 5 attempts *

	Player 1	Player 2	Player 3	Player 4
Attempt 1				
2				
3				
4				
5				

Put a ✓ or X if you complete or fail the task.

(1) What is the probability that your group did 5 or more bounces? Write your answer as a fraction and a percentage.

(2) Let's say your team took 400 attempts at this challenge. Using the probability from above... Find how many times your group bounces the ball 5 or more times out of 400.

(3) What is the probability that your group got 4 bounces or less? Write your as a fraction and a percentage.

To get a 4

4. Flip off

* Each person has 4 attempts *

	Player 1	Player 2	Player 3	Player 4
Attempt 1				
2				
3				
4				

Put a ✓ or X if you complete or fail the task.

(1) What is the probability that your group completed the task? Write your answer as a fraction and a percentage.

(2) Let's say your team took 100 attempts at this challenge. Using the probability from above... Find how many times your group completes the challege out of 100.

(3) What is the probability that your group failed the task? Write your as a fraction and a percentage.

To get a 4

5. Wall head ball

*Each person has 3 attempts *

	Player 1	Player 2	Player 3	Player 4
Attempt 1				
2				
3				

Put a ✓ or X if you complete or fail the task.

(1) What is the probability that your group completed the task? Write your answer as a fraction and a percentage.

(2) Let's say your team took 125 attempts at this challenge. Using the probability from above... Find how many times your group completes the challege out of 125.

(3) What is the probability that your group failed the task? Write your as a fraction and a percentage.

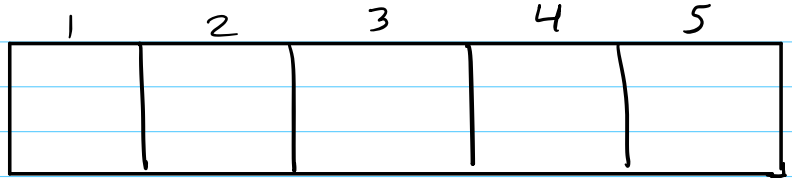
To get a 4

DAY THREE!

Video games and Probability

Question of the day: If you were given $5,000 what would you do with it?

SNAKE NOTES



Write the score in the box.

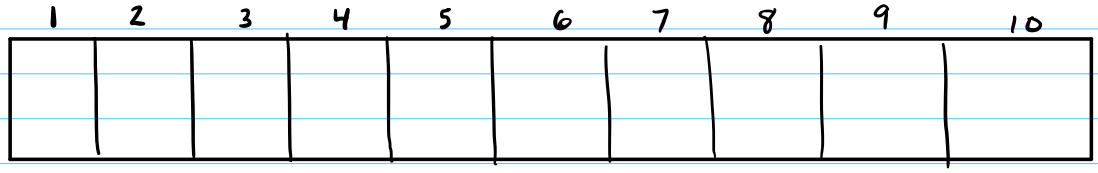
First 5 results

1. What is the probability that the class scored 15 or below? Find the fraction and the percent.

2. What is the probability that the class scored 15 or above? Find the fraction and the percent.

SNAKE NOTES

Write the score in the box.



All 10 results

1. What is the probability that the class scored 15 or below? Find the fraction and the percent.

2. What is the probability that the class scored 15 or above? Find the fraction and the percent.

To get a 4!!

Each class is doing this activity with 10 students. There are 3 math class sections.

1. How many students should score 15 or below? Hint.. Use the probability you found above in 3.

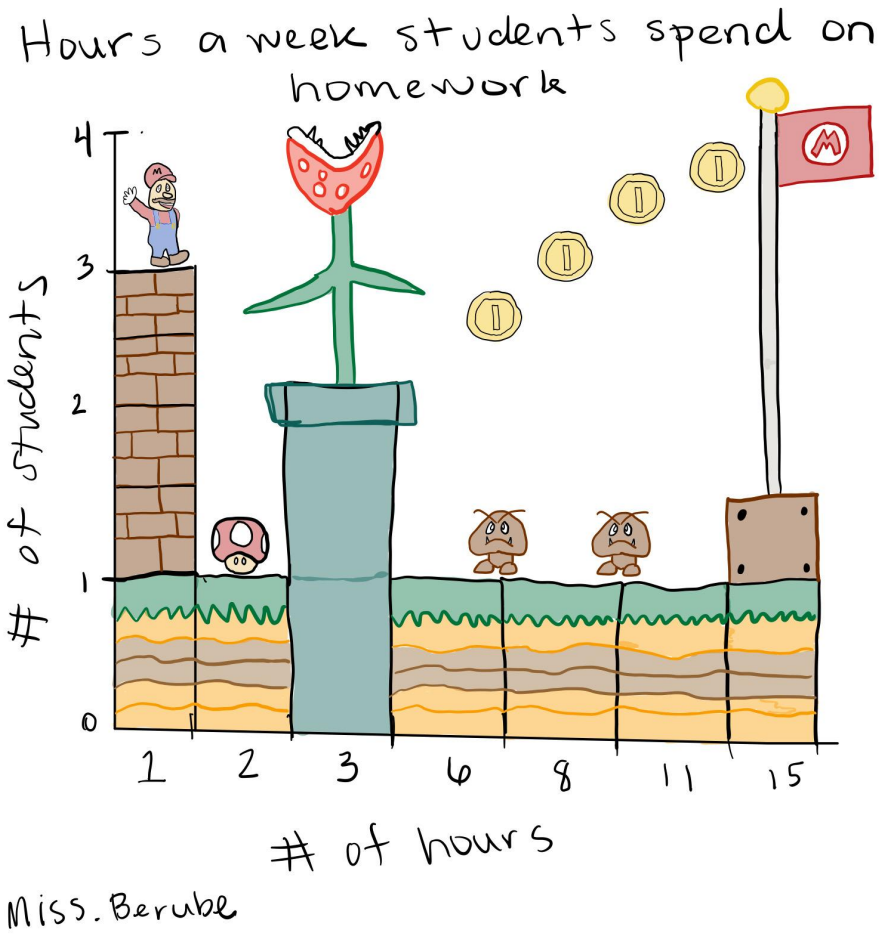
2. How many students should score 15 or above? Hint.. Use the probability you found above in 4.

DAY FOUR

Directions

- Create a bar graphing using the data from Snake
- Name on front or back (these might be hung in the halway)
- Graph title
- Label X and Y axis
- Plot data from all classes (30)
- USE ART, BE CREATIVE
- Paper or online option

Data: 1, 1, 1, 2, 3, 3, 6, 8, 11, 15



DAY FIVE

Guided questions and sentence starters

1. How did you choose how to label and space out your x and y axis?

   I chose to label my x axis as _____ and my y axis as _____ because _____.

2. Why did you decide to draw the picture that you did?

   I decided to draw _____ on the graph because _____.

3. What did you like and not like about creating the art graph?

   I liked _____ and did not like _____ about the art graph.