



Name: \_\_\_\_\_

## CCSD Math Summer Calendar

### Entering Probability & Statistics

- Complete the Math Calendar and return to your math teacher on the first day of school.
- You may finish these at your own pace. Most weeks have a helpful, optional tutorial video link.
- Show ALL WORK on a separate sheet of paper with problem numbers CLEARLY labeled

#### Week of June 1<sup>st</sup>: Fractions

##### Video Links:

<https://www.youtube.com/watch?v=mO53rHElQr4>

<https://www.youtube.com/watch?v=tDQipFjAoT8>

**Problem 1a:** a.  $\frac{2}{4} + \frac{1}{4}$       b.  $\frac{2}{3} + \frac{1}{3}$       c.  $\frac{2}{3} - \frac{1}{3}$       d.  $\frac{2}{4} - \frac{1}{4}$

**Problem 2a:** a.  $\frac{2}{3} + \frac{1}{2}$       b.  $\frac{3}{5} + \frac{1}{3}$       c.  $\frac{2}{3} - \frac{1}{2}$       d.  $\frac{4}{3} - \frac{1}{3}$

**Problem 3a:** a.  $\frac{3}{5} \times \frac{10}{21}$       b.  $1\frac{3}{5} \times \frac{10}{21}$       c.  $\frac{1}{2} \div \frac{3}{4}$       d.  $2\frac{2}{5} \div 3\frac{3}{5}$

**Problem 4a:** a.  $\frac{3}{5} \times \frac{10}{21} + \frac{1}{2}$       b.  $\frac{1}{4} \div 5 - \frac{4}{5}$

**Problem 5a:** Order the following fractions in the required order.

1)  $2\frac{3}{6}, \frac{12}{25}, 1\frac{3}{4}, -\frac{48}{50}, \frac{3}{8}$   
greatest  $\longrightarrow$  least

2)  $\frac{2}{20}, \frac{11}{25}, \frac{1}{2}, \frac{2}{3}, -1\frac{2}{4}$   
greatest  $\longrightarrow$  least

3)  $1\frac{3}{4}, 2\frac{1}{8}, 1\frac{4}{9}, 1\frac{4}{20}, -\frac{8}{50}$   
greatest  $\longrightarrow$  least

4)  $1, -\frac{4}{10}, \frac{3}{9}, -1\frac{2}{5}, -\frac{95}{100}$   
least  $\longrightarrow$  greatest

### Week of June 8<sup>th</sup>: Solving two-step equations

**Video Link:** <https://www.khanacademy.org/math/pre-algebra/pre-algebra-equations-expressions/pre-algebra-2-step-equations-intro/a/two-step-equations-review>

**Problem 1b:**  $5x + 5 = 125$

**Problem 2b:**  $\frac{3}{4}x = 3$

**Problem 3b:**  $6x - 6 = 42$

**Problem 4b:**  $7x - 10 = 39$

**Problem 5b:**  $10x - 46 = 4$

### Week of June 15<sup>th</sup>: Central Tendency

**Video Link:** <https://www.youtube.com/watch?v=A1mQ9kD-i9I>

**Problem 1c:** Find the mean, median, mode, and range of the following set of numbers:

1, 3, 5, 7, 9, 13, 15, 15

**Problem 2c:** Find the mean, median, mode, and range of the following set of numbers:

113, 15, 21, 22, 24, 24, 24, 25, 26, 31

**Problem 3c:** Find the mean, median, mode, and range of the following set of numbers:

33, 23, 12, 24, 46, 47, 23, 2, 78

**Problem 4c:** Find the mean, median, mode, and range of the following set of numbers:

1.2, 3.1, 1.5, 5.6, 3.4, 9.2

**Problem 5c:** Find the mean, median, mode, and range of the following set of numbers:

121, 141, 654, 76, 34, 435, 235, 345

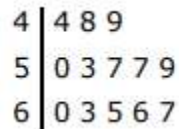
### Week of June 22<sup>nd</sup>: Stem and Leaf Plots

**Video Link:** <https://www.youtube.com/watch?v=MUCvUgGfzdo>

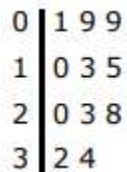
**Problem 1d:** Draw a stem-and-leaf plot of the following set of data: 3, 5, 15, 17, 19, 23, 25, 27, 32

**Problem 2d:** Draw a stem-and-leaf plot of the following set of data: 13, 15, 23, 25, 14, 7, 32, 45, 2, 1

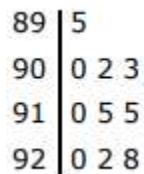
**Problem 3d:** The following is a stem-and-leaf plot of the heights (inches) of a group of students. How tall is the tallest person?



**Problem 4d:** The following is a stem-and-leaf plot of the number of fish caught by each person on a weekend trip of a few friends. How many people went fishing?



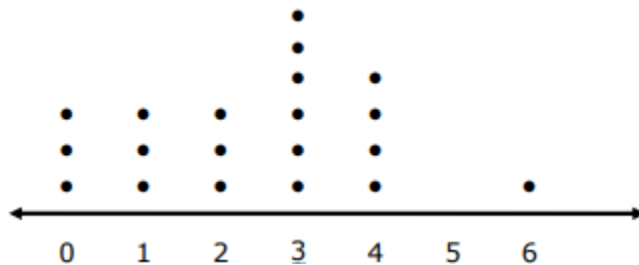
**Problem 5d:** The following is a stem-and-leaf plot of a range of 10 numbers. What is the median value in the set?



#### Week of June 29<sup>th</sup>: Dot Plots

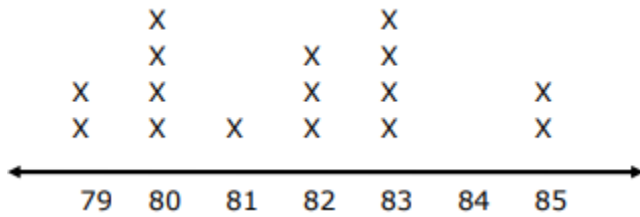
**Video Link:** <https://www.youtube.com/watch?v=gdE46YSedvE>

**Problem 1e:** The following is a dot plot of the numbers of siblings students have:



- How many of the students have six siblings?
- How many of the students have no siblings?
- How many of the students have three or more siblings?

**Problem 2e:** The following is a dot plot of the pulse rates of a group of boys:



- What is the range of the pulse rates?
- How many boys had a pulse rate over 81?
- How many boys had a pulse rate of 83?

**Problem 3e:** Create a dot plot of the following set of data:

23, 24, 25, 25, 26, 31, 32, 34, 36, 43, 56, 65, 65, 68, 67

**Problem 4e:** Create a dot plot of the following set of data:

16, 22, 25, 18, 21, 17, 18, 17, 19, 20, 19, 22, 19, 18, 20, 19, 20, 21, 19, 25, 24

**Problem 5e:** Create a dot plot of the following set of data:

9, 4, 8, 2, 7, 3, 5, 6, 1, 4, 7, 6, 8, 5, 6, 5, 6, 7, 11, 14, 6

### Week of July 6<sup>th</sup>: Literal Equations

**Video Link:** <https://www.khanacademy.org/math/algebra-home/alg-basic-eq-ineq/alg-old-school-equations/v/solving-for-a-variable>

**Problem 1f:** Solve  $d = rt$  for  $t$ .

**Problem 2f:** Solve  $A = \frac{bh}{2}$  for  $h$ .

**Problem 3f:** Solve  $A = \frac{(b_1 + b_2)h}{2}$  for  $b_2$ .

**Problem 4f:** Solve  $m = \frac{y_2 - y_1}{x_2 - x_1}$  for  $y_1$ .

**Problem 5f:** Solve  $F = \frac{lt}{d}$  for  $l$ .

### Week of July 13<sup>th</sup>: Basic Probability

#### Video Links:

<https://www.youtube.com/watch?v=yUal0JriZtY>

<https://www.youtube.com/watch?v=uzkc-qNVoOk&list=PLC58778F28211FA19>

**Problem 1g:** There are 2 red marbles, 4 blue marbles, and 4 green marbles in a bag.

- What is the probability of pulling a red marble?
- What is the probability of pulling a blue marble?
- What is the probability of pulling a green marble?
- What is the probability of pulling a red or blue marble?

**Problem 2g:** In a deck of 52 playing cards, what is the probability of drawing a spade?

**Problem 3g:** In a deck of 52 playing cards, are the odds favorable that you will draw a heart or a diamond?

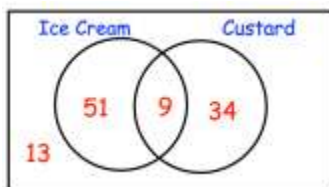
**Problem 4g:** What is the probability of rolling a six on a fair die?

**Problem 5g:** What is the probability of rolling a 3 or an even number on a fair die?

### Week of July 20<sup>th</sup>: Venn Diagrams

**Video Link:** [https://www.youtube.com/watch?v=lqaBt1\\_6PDA](https://www.youtube.com/watch?v=lqaBt1_6PDA)

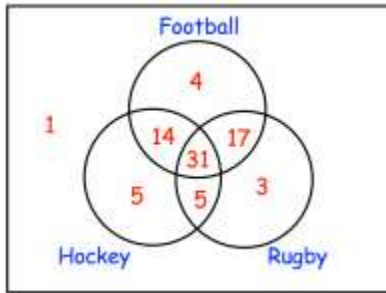
**Problem 1h:** At a wedding, the guests may have ice cream or custard with their dessert. The Venn diagram shows information about the choices the guests made.



- How many had custard?
- How many had ice cream and custard?
- How many went to the wedding?

**Problem 2h:** Create a Venn diagram of the following situation: A gym runs two fitness classes, spinning and circuits. On Saturday 100 people visited the gym. 18 people attended the spinning class. 10 people attended both classes. 56 people did not attend either class.

**Problem 3h:** Jennifer asked 80 people which sports they enjoy from Football, Hockey and Rugby



- How many enjoy all 3 sports?
- How many people enjoy football and hockey but not rugby?
- How many people enjoy football and rugby but not hockey?

**Problem 4h:** Create a Venn diagram of the following situation: In a class of 24 students, 12 students play the piano, 13 students play the guitar, and 4 students play neither instrument.

**Problem 5h:** Suppose 135 students are surveyed about their favorite ice cream flavors. Draw a Venn Diagram in the box for the following statements, and then use it to answer the questions.

63 like Chocolate

61 like Caramel

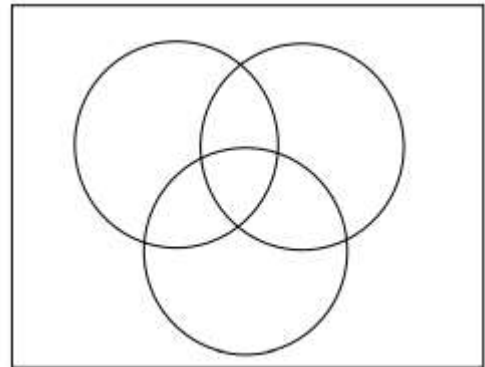
53 like Vanilla

28 like Caramel and Vanilla

31 like Chocolate and Caramel

22 like Chocolate and Vanilla

15 like all three flavors



How many students do NOT like any of the given flavors?

How many students like only Caramel?