

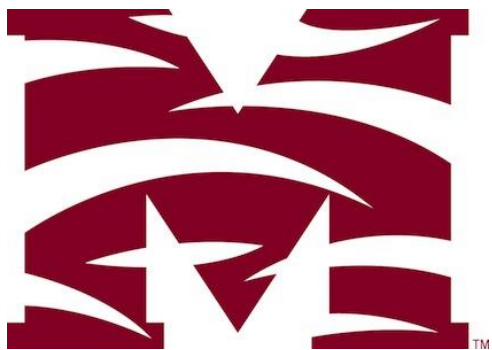


Name \_\_\_\_\_

## 4<sup>th</sup> Grade Math Remote Learning Packet

Weeks 7-9

May 11<sup>th</sup> - May 29<sup>th</sup>



Parents please note that all academic packets are mailed home to scholars but are also available on our website at [www.brighterchoice.org](http://www.brighterchoice.org) under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars. Online assignments are to be completed if you have access to technology. If you are unable to access packets online, every Wednesday between the hours of 8:00am-11:00am someone will be at our school to provide a hard copy. We thank you greatly for your continued support!

# 4<sup>th</sup> Grade Math Scope and Sequence – Phase 5

## Week 7

May 11<sup>th</sup> - May 15<sup>th</sup>

Date	Standards <i>Identify CC standards that scholars would benefit from practice. Reflect back to CFU notes or past assessment data</i>	Description of Packet Assignment (30 minutes of work)	Online Assignment
5.11.20 Remote learning lesson 28	<p>4.NF.3b: Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: <math>3/8 = 1/8 + 1/8 + 1/8</math> ; <math>3/8 = 1/8 + 2/8</math> ; <math>2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>.</p> <p>4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p> <p>4.NF.4a; Understand a fraction <math>a/b</math> as a multiple of <math>1/b</math>. For example, use a visual fraction model to represent <math>5/4</math> as the product <math>5 \times (1/4)</math>, recording the conclusion by the equation <math>5/4 = 5 \times (1/4)</math>.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will decompose improper fractions and rewrite them as mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>
5.12.20 Remote learning lesson 29	<p>4.NF.3b: Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: <math>3/8 = 1/8 + 1/8 + 1/8</math> ; <math>3/8 = 1/8 + 2/8</math> ; <math>2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>.</p> <p>4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will convert mixed numbers greater than 1 into improper fractions. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>

<p>5.13.20 Remote learning lesson 30</p>	<p>4.NF.2; Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as <math>\frac{1}{2}</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they use cross multiplication to compare fractions greater than 1. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>
<p>5.14.20 Remote learning lesson 31</p>	<p>4.NF.2; Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as <math>\frac{1}{2}</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will use multiplication to make common numerators and denominators to compare fractions. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>
<p>5.15.20 Remote learning lesson 32</p>	<p>3.MD.4Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they create line plots and solve questions based on line plots. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>

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

Date: 5/11/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I change improper fractions into mixed numbers?**

**Objective: I can use a number bond and/or division to change an improper fraction into a mixed number.**

4<sup>th</sup> grade math standard:

4.NF.4a; Understand a fraction  $a/b$  as a multiple of  $1/b$ . For example, use a visual fraction model to represent  $5/4$  as the product  $5 \times (1/4)$ , recording the conclusion by the equation  $5/4 = 5 \times (1/4)$ .

4.NF.3b: Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:  $3/8 = 1/8 + 1/8 + 1/8$  ;  $3/8 = 1/8 + 2/8$  ;  $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$ .

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

**Online support:**

**You can access videos to assist with the skills covered in this packet by visiting my YouTube channel at:**

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view\\_as=subscriber](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber)

**Input/guided notes**

Today we will be working on change improper fractions into mixed numbers. Let's review these two terms first.

**Improper fraction**- a fraction that has the bigger number on the top instead of on the bottom. For example:  $\frac{7}{3}$

**Mixed number**- a number that has a whole number and a fraction.

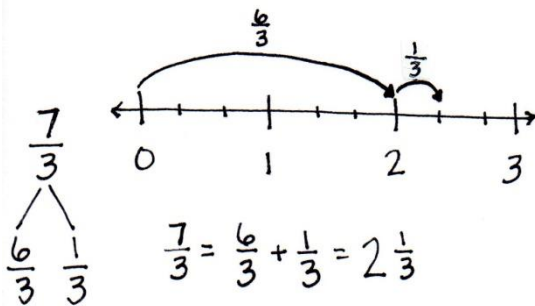
For example:  $2\frac{1}{3}$

One way that we can change an improper fraction to a mixed number is by using a number bond.



1. Write the improper fraction you want to change at the top of your number bond.
2. Draw 2 arms off of your top circle.
3. In the first arm right how many of that unit a whole equals.
4. In the second number bond, write how many of that unit you have left over.

**Teacher Model 1:**



This number line is show that from 0-2 is 6 thirds.  $6/3=2$ . After 2 wholes are made  $1/3$  is what is leftover, therefore we move 1 more tick mark on our number line.

In this model above, I began with the improper fraction 7 thirds. I know that there are 3 thirds in 1 whole, so in 2 wholes there are 6 thirds. Instead of drawing 2 arms with the fraction  $3/3$  I chose to draw 1 arm with  $6/3$  and then write what is left over.

**Teacher Model 2:**  $\frac{13}{5}$

Please see this model completed on my YouTube channel:

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view\\_as=subscriber](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber)

Another way that we can change an improper fraction into a mixed number is buying using division.

Changing an improper fraction to a mixed number



1. Ask: how many times does the denominator go into the numerator?
2. The answer to that question in step 1 becomes your whole number in your mixed number.
3. Ask: how much are left over?-this becomes the numerator of your fraction, the denominator stays the same.

**Review Terms:**

Numerator: top of a fraction

Denominator: bottom of a fraction

Remainder: the amount left over after dividing

**Teacher model 3:**

Let's think about 7 thirds (the example from teacher model 1)

1. 3 goes into 7 twice. ( $7 \div 3 = 2$ )
2. This leaves me with a remainder of 1.
3. 1 is my numerator, 3 is still my denominator.  
 $7/3 = 2 \frac{1}{3}$

**Teacher Model 4:**

$$\frac{12}{5}$$

To see this example completed, please visit the site below:

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view\\_as=subscriber](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber)

### CFU/Your Turn

Directions: Convert each fraction to a mixed number. Show your work drawing a number bond and dividing.

	Number bond	Division
$\frac{11}{3}$		
$\frac{9}{2}$		
$\frac{17}{4}$		
$\frac{25}{6}$		

**Application Problem (review)**

Shelly read her book for  $\frac{1}{2}$  hour each afternoon for 9 days. How many hours did Shelly spend reading in all 9 days?

**Exit Ticket**

Directions: Rename the fraction as a mixed number by using either method (or both) from today's lesson.

a.  $\frac{17}{5}$

b.  $\frac{19}{3}$

c.  $\frac{11}{4}$



Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/12/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I change a mixed number into an improper fraction?**

**Objective: I can use multiplication and addition to change a mixed number into an improper fraction.**

4<sup>th</sup> grade math standard:

4.NF.3b: Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$  ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$  ;  $2 \frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ .

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

**Online support:**

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**Input/Guided Notes**

In yesterday's lesson, we learned how to change an improper fraction into a mixed number. Today we will work on doing the opposite, changing a mixed number back into an improper fraction.

Like yesterday, I will give you two methods of doing this. One method will be using a number bond and the other will be using an equation.

**Teacher Model 1:**

$$2\frac{1}{6}$$

$$\swarrow \quad \searrow$$

$$\cancel{2} \quad \frac{1}{6}$$

$$\frac{12}{6}$$

Here I have the mixed number 2 and one sixth. My unit is sixths. First, I can change my whole number into that unit of sixths. If there are 6/6 in one whole, then there are 12/6 in two wholes. With the 1/6 that is left I can add it to 12/6

So,  $12/6 + 1/6 = 13/6$

**Teacher Model 2:**



$$3\frac{1}{3}$$

$$\swarrow \quad \searrow$$

$$\frac{9}{3} \quad \frac{1}{3}$$

In this example, I began with 3 and one third, so my unit is thirds. First I will change 3 wholes into 9 thirds. I know that  $3=9/3$  because  $1=3/3$ .

$3/3 + 3/3 + 3/3 = 9/3$

After my whole number is changed, I add on what is left.

$9/3 + 1/3 = 10/3$

Another way we can change mixed numbers into improper fractions is by following the steps below:

Changing a mixed number



Improper fraction

1. Multiply the denominator of the fraction by the whole number.
2. Add the numerator to the product you get in step one.
3. Write your answer over the same denominator as you started with.

**Teacher Model 3:**

$$4\frac{1}{4}$$

To change this mixed number into an improper fraction I can:

1.  $4 \times 4 = 16$
2.  $16 + 1 = 17$
3.  $17/4$  ← final answer

To see the next two examples done please tune in!

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view\\_as=subscriber](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber)

Teacher model 4  $2\frac{2}{3}$	Teacher model 5  $3\frac{4}{5}$
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**CFU/Your Turn**

	Number bond	Equation (multiply then add)
$2\frac{3}{4}$		
$4\frac{6}{8}$		
$3\frac{3}{8}$		
$3\frac{1}{10}$		

## Application Problem (review)

Mrs. Fowler knew that the perimeter of the soccer field was  $\frac{1}{6}$  mile. Her goal was to walk two miles while watching her daughter's game. If she walked around the field 13 times, did she meet her goal?

## Exit Ticket

Directions: Convert each mixed number to an improper fraction greater than 1 using either method (or both) reviewed in today's lesson.

1.  $3\frac{1}{5}$

2.  $2\frac{3}{5}$

3.  $4\frac{2}{9}$

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/13/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today’s review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today’s lesson and then complete the boxes.

-thank you😊

**LEQ: How do I compare fractions that are greater than 1?**

**Objective: I can compare fractions greater than 1 whole by using the cross multiplication strategy.**

4<sup>th</sup> grade math standard:

4.NF.2; Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

**Online support:**

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**Input/Guided Notes**

There are 2 ways that we can compare fractions greater than one:

<b>Strategy 1</b>	<b>Strategy 2</b>
1. Make sure both numbers are in mixed number form. 2. If the whole numbers are different compare the whole numbers. 3. If the whole number are the same, compare the fractions.	1. Make sure that both numbers are in improper fraction form. 2. Cross multiply. 3. Compare the products of the cross-multiplication.

**Teacher Model 1:**

232  $\frac{29}{7}$  and  $\frac{31}{8}$  217 These 2 fractions are already written as improper fractions.

For this situation we can cross multiply.

$$7 \times 31 = 217 \quad 8 \times 29 = 232$$

$217 < 232$  therefore, 29 sevenths is greater than 31 eighths.  $\frac{29}{7} > \frac{31}{8}$

Another way we can think about solving this is changing both improper fractions into mixed numbers, we can do this by dividing.

$$29 \div 7 = 4 \text{ r } 1 \text{ ( 4 and } 1/7) \quad 31 \div 8 = 3 \text{ r } 7 \text{ ( 3 and } 7/8)$$

4 wholes is > than 3 wholes so again we prove that  $\frac{29}{7} > \frac{31}{8}$

**Teacher Model 2:** to see this model completed tune in:

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

$$5\frac{7}{8} \text{ and } 5\frac{9}{10}$$

**CFU/Your Turn**

a.  $5\frac{1}{3}$  \_\_\_\_\_  $4\frac{3}{4}$

b.  $\frac{12}{6}$  \_\_\_\_\_  $\frac{25}{12}$

c.  $\frac{18}{7}$  \_\_\_\_\_  $\frac{17}{5}$

d.  $5\frac{2}{5}$  \_\_\_\_\_  $5\frac{5}{8}$



### Application Problem (review)

Barbara needed  $3\frac{1}{4}$  cups of flour for her recipe. If she measured  $\frac{1}{4}$  cup at a time, how many times did she have to fill the measuring cup?

### Exit Ticket

Directions: Use one of the methods from today's lesson to compare each pair of fractions greater than 1, using the  $<$ ,  $>$  or  $=$  symbols.

1.  $3\frac{2}{3}$  \_\_\_\_\_  $3\frac{4}{6}$

2.  $\frac{12}{3}$  \_\_\_\_\_  $\frac{27}{7}$

3.  $\frac{10}{6}$  \_\_\_\_\_  $\frac{5}{4}$

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/14/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I make common numerators and denominators to compare fractions?**

**Objective: I can compare fractions by creating common numerators and denominators.**

4<sup>th</sup> grade math standard:

4.NF.2; Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

**Online support:**

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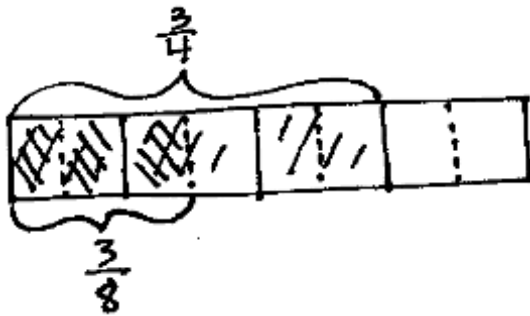
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**Input/Guided Notes**

- A strategy we have learned to compare fractions is to make the denominators the same. We can make common denominators by using multiplication.
- Sometimes, fractions will have the same numerators; if this is the case we can use the size of the pieces to help us.

Take a look at the 2 fractions below. They both have the same whole number, so that does not help us compare. They also both have the same numerator. When fractions have the same numerator we can look at the denominator for help. We know that fourths are greater than eighths, so that means that  $\frac{3}{4}$  is greater than  $\frac{3}{8}$ . If we think about a tape diagram,  $\frac{3}{4}$  has more shaded space than  $\frac{3}{8}$  which makes it larger.

$$3\frac{3}{8} \text{ and } 3\frac{3}{4}$$



Answer:  $3\frac{3}{8} < 3\frac{3}{4}$

**Teacher Model 2:**  $4\frac{3}{4}$  and  $\frac{23}{5}$

These 2 fractions do not have anything in common right now. They do not have the same denominator, numerator and also are written 2 different ways. First, we want to change the improper fraction into a mixed number.

$$23 \div 5 = 4 \text{ r } 3 \text{ (4 and 3 fifths.)}$$

$$\frac{23}{5} = 4\frac{3}{5} \text{ Now, we can see that they have the same whole number. } 4\frac{3}{4} \text{ and } 4\frac{3}{5}$$

We are left with comparing the fractions  $\frac{3}{4}$  and  $\frac{3}{5}$ . We can make a common denominator by multiplying them together. The common denominator will be 20.

$$\frac{3}{4} = \frac{15}{20}$$

$$\frac{3}{5} = \frac{12}{20}$$

When denominators are the same, compare the numerator.  $15 > 12$  so,

$$3/4 > 3/5. \text{ Answer: } 4\frac{3}{4} > 4\frac{3}{5}$$

To see **Teacher Model 3** tune in!

$$2\frac{2}{3} \text{ and } 2\frac{3}{5}.$$

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

### **CFU/Your Turn**

a.  $5\frac{3}{4}$  \_\_\_\_\_  $5\frac{3}{8}$

b.  $5\frac{2}{5}$  \_\_\_\_\_  $5\frac{8}{10}$

c.  $\frac{22}{5}$  \_\_\_\_\_  $4\frac{2}{7}$

d.  $\frac{21}{4}$  \_\_\_\_\_  $5\frac{2}{5}$

### **Application Problem**

Jeremy ran 27 laps on a track that was  $\frac{1}{8}$  mile long. Jimmy ran 15 laps on a track that was  $\frac{1}{4}$  mile long. Who ran farther? (Hint: compare 27 eighths and 15 fourths)

## Exit Ticket

Directions: Compare each pair of fractions using  $>$ ,  $<$ , or  $=$  using any strategy.

1.  $4\frac{3}{8}$  \_\_\_\_\_  $4\frac{1}{4}$

2.  $3\frac{4}{5}$  \_\_\_\_\_  $3\frac{9}{10}$

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
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BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

### **LEQ: How do I use a line plot to help interpret data?**

#### **Objective: I can use a line plot to interpret data.**

4<sup>th</sup> grade math standard:

3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

**Online support:** \_\_\_\_\_

**You can access videos to assist with the skills covered in this packet by visiting my YouTube channel at:**

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

## **Input/Guided Notes**

### **What is a line plot?**

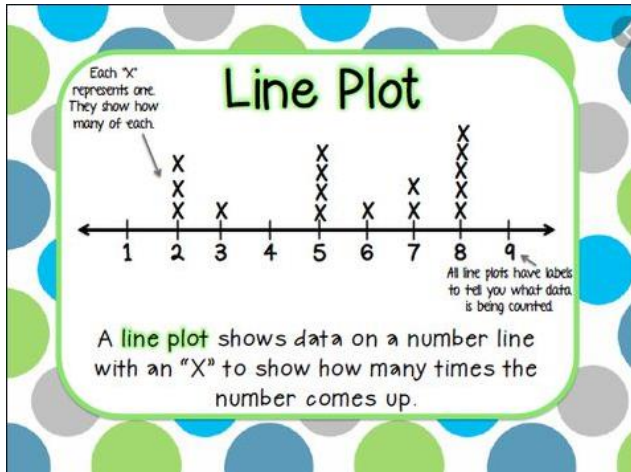
A **Line plot** can be defined as a **graph** that displays data as points or check marks above a number **line**, showing the frequency of each value.

### **What is frequency?**

**Frequency** can be described as how many times something happens in a given set of data.

In a **line plot**, we typically use X's or points to display the data in a line plot.

Below is an example of what a line plot looks like:



**Teacher model 1:** Below is a line plot that has already been created for us. We can use the information in this line plot to answer questions based on the data.

**Heights of Children on Third-Grade Basketball Team**



This line plot is showing the heights of children on a basketball team. Each "X" represents one child. The unit that is being used is inches.

Below is a set of questions that can be answered based on this line plot.

- a. **How many children are on the team? How do you know?**

*I know that there are 15 children on the team because I counted all of the "X's".*



- b. How many children are less than 53 inches tall?

*There are 6 children less than 53 inches tall. I know this because I need to count the X's that come before 53 on the number line.*

- c. Coach Harris says that the most common height for the children on his team is  $53\frac{1}{2}$  inches. Is he right? Explain your answer.

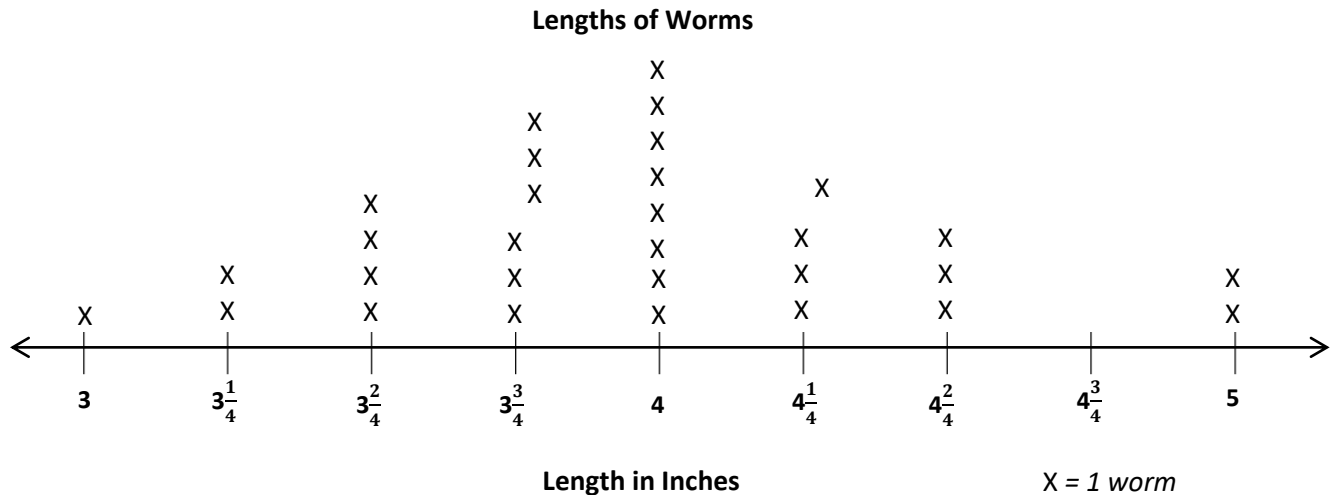
The phrase "most common" means what happens the most often. I need to look for the height that has the MOST "X's", that will be the most common. *52 inches and  $53\frac{1}{2}$  inches both have 3 X's therefore they both are the most common which means that Coach Harris is wrong.*

- d. Coach Harris says that the player who does the tip-off in the beginning of the game has to be at least 54 inches tall. How many children could do the tip-off?

In this case, the phrase "at least" means that the child who does the tip-off has to be 54 inches tall or taller than 54 inches. *Looking at the line plot there are 4 children who could do the tip-off at the beginning of the game.*

## CFU/Your Turn

Directions: Miss Vernier's class is studying worms. The lengths of the worms in inches are shown in the line plot below.

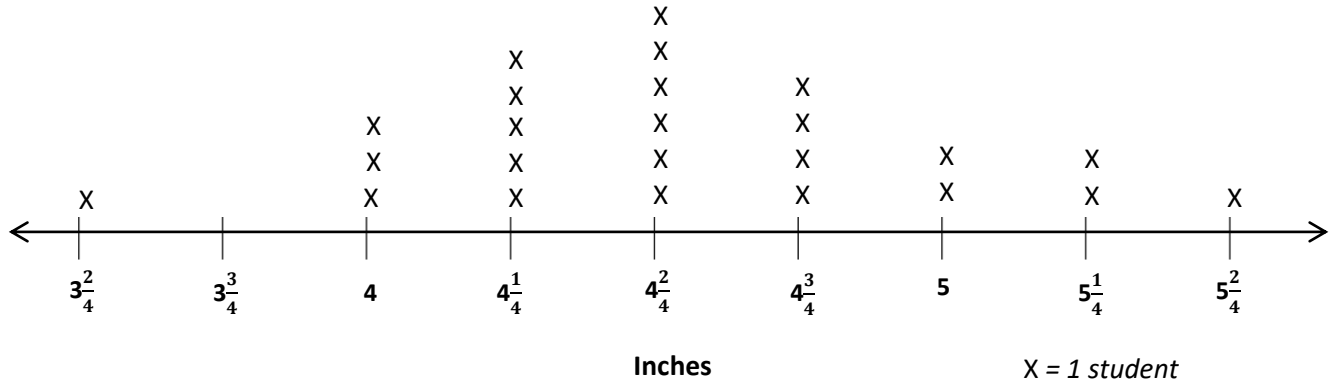


- a. How many worms did the class measure? How do you know?
- b. Cara says that there are more worms  $3\frac{3}{4}$  inches long than worms that are  $3\frac{2}{4}$  and  $4\frac{1}{4}$  inches long combined. Is she right? Explain your answer.

## Exit Ticket

Ms. Bravo measures the lengths of her third-grade students' hands in inches. The lengths are shown on the line plot below.

**Lengths of Hands of Third-Grade Students**



- a. How many students are in Ms. Bravo's class? How do you know?
  
- b. How many students' hands are longer than  $4\frac{2}{4}$  inches?

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher	
Today my scholar was successful with....	Today my scholar struggled with understanding...

# 4<sup>th</sup> Grade Math Scope and Sequence – Phase 5

## Week 8

May 18<sup>th</sup> - May 22<sup>nd</sup>

Date	Standards <i>Identify CC standards that scholars would benefit from practice. Reflect back to CFU notes or past assessment data</i>	Description of Packet Assignment (30 minutes of work)	Online Assignment
5.18.20 Remote lesson 33	3.MD.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they create line plots and solve questions based on line plots. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>
5.19.20 Remote lesson 34	3.MD.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they create line plots and solve questions based on line plots. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>
5.20.20 Remote lesson 35	4.MD.4: Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they create line plots and solve questions based on line plots. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>

<p>5.21.20 Remote lesson 36</p>	<p>3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will solve 1 and 2 step word problems that involve graphs and data tables. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>
<p>5.22.20 Remote lesson 37</p>	<p>3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. 3.MD.4Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will solve 1 and 2 step word problems that involve graphs and data tables. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>

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

Date: 5/18/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**Objective: I can use a line plot to interpret data.**

4<sup>th</sup> grade math standard:

3.MD.4:Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

**Online support:** \_\_\_\_\_

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**Input/Guided Notes**

In yesterday's lesson we began looking at line plots. Please refer back to remote lesson 32 to review what a line plot is. Today, we are going to use data to create our own line plots.

Straw Lengths (in Inches)				
3	4	$4\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{3}{4}$
$3\frac{3}{4}$	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$4\frac{3}{4}$
$4\frac{1}{4}$	5	3	$3\frac{1}{2}$	$4\frac{1}{2}$
$4\frac{1}{2}$	4	$3\frac{1}{4}$	5	$4\frac{1}{4}$

Above is a set of data. We are going to use this data to create a line plot.



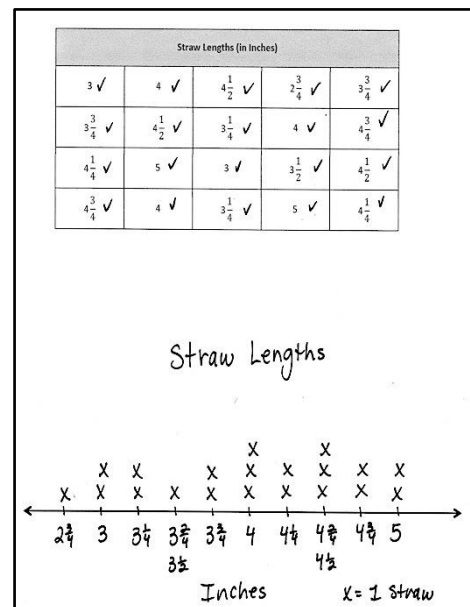
**Steps to creating a line plot:**

1. Draw a number line.
2. Find the smallest value in the set of data and place is at the beginning of the number line.
3. Find the largest value in the set of data and place it at the end of the number line.
4. Determine the scale.  
A scale is what you will count by on the number line (1s, ½'s, ¼'s, etc..)
5. Determine how many tick marks you will need on your number line by counting from the smallest to the largest value using the scale you determined.
6. Put your tick marks on the number line and label all the values from the smallest to largest.
7. Plot the data. Look at the data table and place an "X" over each point on the number line, there will be some that have more than one X and some that might not have any marks at all. Cross them out as you go.

**Teacher Model 1**

Using the data that we were given this is the line plot that can be created. The smallest value was  $2\frac{3}{4}$  and the largest was 5. I chose to count by  $\frac{1}{4}$  because the fractions in the data all including quarters (fourths). After the scale was filled in, I plotted the data and checked off each value as I went. On my line plot I also included a title, my unit (inches) and what each X represented

Sample Work



Now, I can use this line plot to answer questions related to the data.

- a. How many straws were measured? Explain how you know. *The total amount of straws measured is 20. I know this because I counted all the X's.*

- b. What is the smallest measurement on the chart? The greatest?

*The smallest measurement is  $2\frac{3}{4}$  inches and the greatest is 5 inches.*

- c. Were the straws measured to the nearest inch? How do you know?

*No, they were not measured to the nearest inch. I know this because some of the measurements had fractions. If they were measured to the nearest each, they would all be written in whole numbers.*

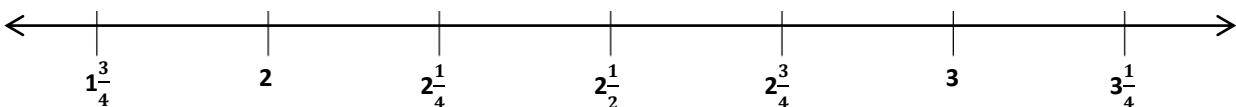
### CFU/Your Turn

Directions: Mrs. Weisse’s class grows beans for a science experiment. The students measure the heights of their bean plants to the nearest  $\frac{1}{4}$  inch and record the measurements as shown below.

Heights of Bean Plants (in Inches)				
$2\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{1}{4}$	$1\frac{3}{4}$	$1\frac{3}{4}$
$1\frac{3}{4}$	3	$2\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{1}{2}$
2	$2\frac{1}{4}$	3	$2\frac{1}{4}$	3
$2\frac{1}{2}$	$3\frac{1}{4}$	$1\frac{3}{4}$	$2\frac{3}{4}$	2

- a. Use the data to complete the line plot below.

Title: \_\_\_\_\_



Remote learning lesson 33

Answer the questions below based on your line plot.

1. How many bean plants are at least  $2\frac{1}{4}$  inches tall?
2. How many bean plants are taller than  $2\frac{3}{4}$  inches?
3. What is the most frequent measurement? How many bean plants were plotted for this measurement?
4. George says that most of the bean plants are at least 3 inches tall. Is he right? Explain your answer.



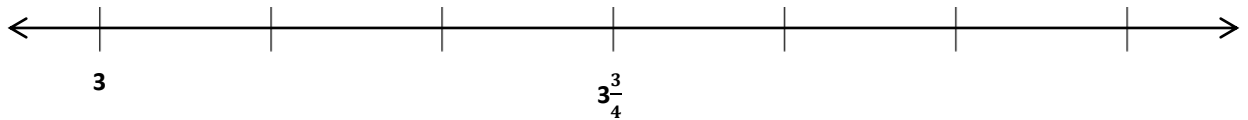
## Exit Ticket

Directions: Scientists measure the growth of mice in inches. The scientists measure the length of the mice to the nearest  $\frac{1}{4}$  inch and record the measurements as shown below. Use the data in the table to create a line plot.

Lengths of Mice (in Inches)				
$3\frac{1}{4}$	3	$3\frac{1}{4}$	$3\frac{3}{4}$	4
$3\frac{3}{4}$	3	$4\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{3}{4}$
4	$4\frac{1}{4}$	4	$4\frac{1}{4}$	4

Label each tick mark. Then, record the data on the line plot below.

Title: \_\_\_\_\_



X = 1 mouse

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/19/2020

BCCS-B

College: \_\_\_\_\_

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-thank you 😊

**LEQ: How do I create a line plot when given a set of data?**

**Objective: I can create a line plot when given a set of data.**

4<sup>th</sup> grade math standard:

3.MD.4:Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

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## **Input/Guided Notes**

Today, you will work on plotting data on a line plot as you did in the previous lesson. The small difference in today's lesson is that there is more data to plot. I have included the same tool kit from yesterday and 1 teach model to help you.

### **Key Terms:**

**Line plot**- a way to display data

**Frequency**- happens the most "most common"

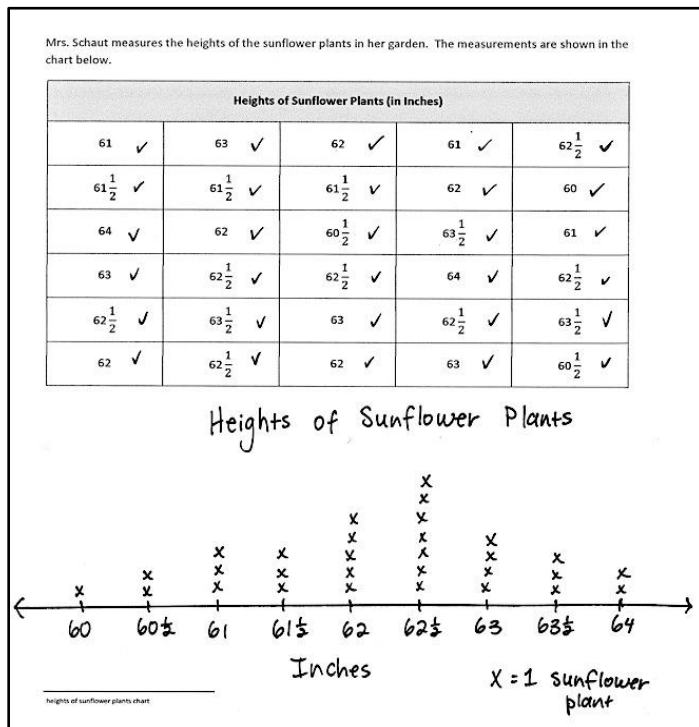
**Scale**- what you are counting by on the number line



**Steps to creating a line plot:**

1. Draw a number line.
2. Find the smallest value in the set of data and place is at the beginning of the number line.
3. Find the largest value in the set of data and place it at the end of the the number line.
4. Determine the scale.  
A scale is what you will count by on the number line (1s, 1/2's, 1/4's, etc..)
5. Determine how many tick marks you will need on your number line by counting from the smallest to the largest value using the scale you determined.
6. Put your tick marks on the number line and label all the values from the smallest to largest.
7. Plot the data. Look at the data table and place an "X" over each point on the number line, there will be some that have more than one X and some that might not have any marks at all. Cross them out as you go.

**Teacher Model 1:**



This data table has many more points than the ones that we saw yesterday but we still create the line plot in the same way. My smallest point was 60 inches and my largest point was 64 inches. Even though those are both whole numbers, my scale was counting by 1/2's because of the data in the table. Each "X" represents 1 sunflower, I created a title and labeled the scale so we know what unit we were using.

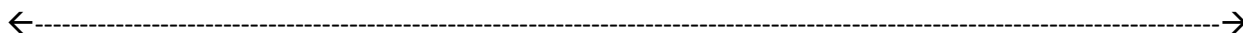
### CFU/Your Turn

Delilah stops under a silver maple tree and collects leaves. At home, she measures the widths of the leaves to the nearest  $\frac{1}{4}$  inch and records the measurements as shown below.

Widths of Silver Maple Tree Leaves (in Inches)				
$5\frac{3}{4}$	6	$6\frac{1}{4}$	6	$5\frac{3}{4}$
$6\frac{1}{2}$	$6\frac{1}{4}$	$5\frac{1}{2}$	$5\frac{3}{4}$	6
$6\frac{1}{4}$	6	6	$6\frac{1}{2}$	$6\frac{1}{4}$
$6\frac{1}{2}$	$5\frac{3}{4}$	$6\frac{1}{4}$	6	$6\frac{3}{4}$
6	$6\frac{1}{4}$	6	$5\frac{3}{4}$	$6\frac{1}{2}$

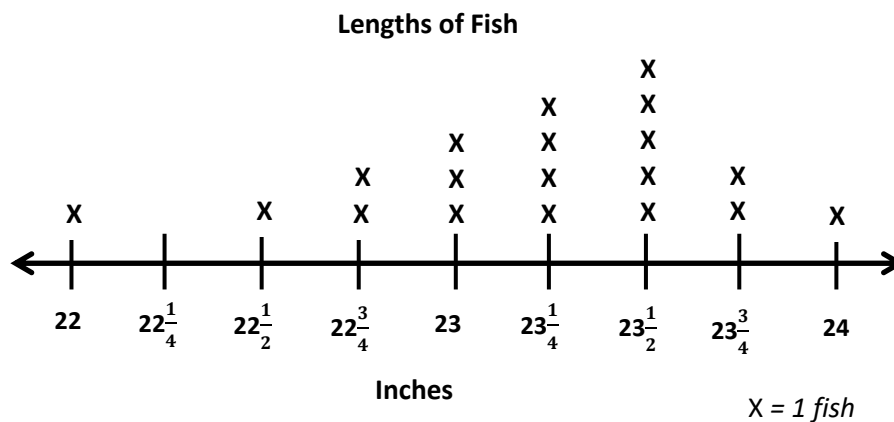
- a. Use the data to create a line plot below.

Title: \_\_\_\_\_



## Exit Ticket

The line plot below shows the lengths of fish the fishing boat caught.



- a. Find the three most frequent measurements on the line plot.
  
- b. Find the difference between the lengths of the longest and shortest fish.
  
- c. How many more fish were  $23\frac{1}{4}$  inches long than 24 inches long?

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/20/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do line plots help me solve word problems?**

**Objective: I can solve word problems based on data from given line plots.**

4<sup>th</sup> grade math standard:

4.MD.4: Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Online support:

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**Input/Guided Notes**

Today we are going to continue to work on creating and reading line plots to help solve word problems. The line plots that we see today will be a little different than the ones that we have seen so far.

The biggest difference will be the fractions that are used in the data. Take a look at **Teacher Model 1** on the next page to see what I mean.



Student	Distance (in miles)
Joe	$2\frac{1}{2}=2\frac{4}{8}$
Arianna	$1\frac{3}{4}=1\frac{6}{8}$
Bobbi	$2\frac{1}{8}$
Morgan	$1\frac{5}{8}$
Jack	$2\frac{5}{8}$
Saisha	$2\frac{1}{4}=2\frac{2}{8}$
Tyler	$2\frac{2}{4}=2\frac{4}{8}$
Jenny	$\frac{5}{8}$
Anson	$2\frac{2}{8}$
Chandra	$2\frac{4}{8}$

**Teacher Model 1:** This line plot shows data of how far students in one class could run before they needed to take a break. If you look at the mixed numbers in this table, some are  $\frac{1}{2}$ 's, some of eighths and some are fourths. It is a little more challenging to create a number line and scale when there's many different kind of fractions, but the good thing is that they all have related denominators.

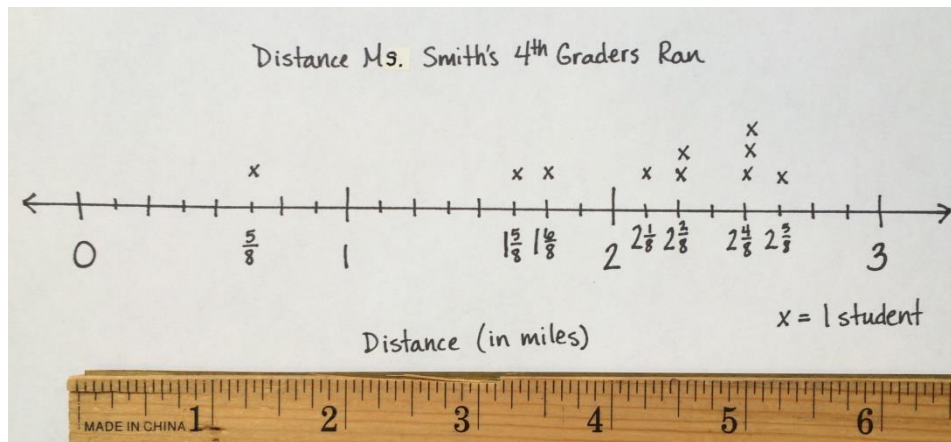
**Related denominators-** denominators that can be changed easily to another using multiplication.

In order to make creating the number line easier we need to change these fractions to have the same denominator. It would be easiest to change all of them to eighths using multiplication.

- To change  $\frac{1}{2}$  to eighths we multiply by 4
- To change fourths to eighths, we multiply by 2.
- The whole numbers can stay the same.

**\*\*whatever you multiply by on the bottom you must multiply by on the top\*\***

In the chart I have changed all the fractions to eighths using multiplication. Now I can create a line plot much more easily.



Above I have a line plot of my data. I started with 0 because the smallest fraction was  $\frac{5}{8}$  and ended with 3 because by largest fraction was  $2\frac{5}{8}$ . There are 8 spaces in between each whole number to represent eighths.

### CFU/Your Turn

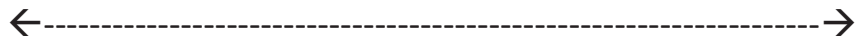
Directions: look at the data in the table and determine what denominator you can change all the fractions into.

Student	Length of time (in hours)
Robin	$\frac{1}{2}$
Bill	1
Katrina	$\frac{3}{4}$
Kelly	$1\frac{3}{4}$
Mary	$1\frac{1}{2}$
Gail	$2\frac{1}{4}$
Scott	$1\frac{3}{4}$
Ben	$2\frac{2}{4}$

**\*\*It will be easiest to change all the fractions to fourths\*\***

After you have changed all the fractions to fourths, create a line plot starting at 1 and ending at 3. Make sure there are 4 spaces in between each of your whole numbers.

Title: Length of time students spent reading



Answer the following question:

1. One of the students read  $\frac{3}{4}$  hour on Friday,  $\frac{3}{4}$  hour on Saturday, and  $\frac{3}{4}$  hour on Sunday. How many hours did that student read over the weekend? Name that student.

## Exit Ticket

Directions: Create a line plot based on the information in the data table provided.

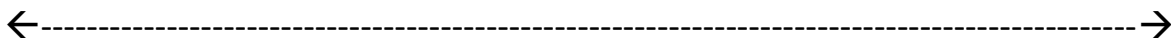
A group of students measured the lengths of their shoes.

The measurements are shown in the table.

Title: \_\_\_\_\_

X= \_\_\_\_\_

Students	Length of shoe (in inches)
Collin	$8\frac{1}{2}$
Dickon	$7\frac{3}{4}$
Ben	$7\frac{1}{2}$
Martha	$7\frac{3}{4}$
Lilias	8
Susan	$8\frac{1}{2}$
Frances	$7\frac{3}{4}$
Mary	$8\frac{3}{4}$



Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/21/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do graphs help solve word problems?**

**Objective: I can solve word problems using graphs and data tables.**

4<sup>th</sup> grade math standard:

3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets

Online support:

**You can access videos to assist with the skills covered in this packet by visiting my YouTube channel at:**

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

**Input/Guided Notes**

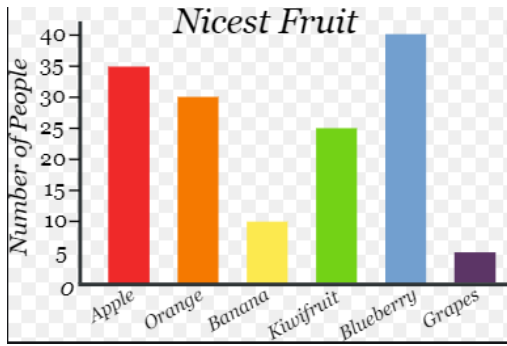
Another type of graph we can use to help solve word problems is called a bar graph. There are 2 different types of bar graphs, vertical and horizontal.

What is a bar graph?

A **bar graph** is a chart that uses **bars** to show comparisons between categories of data. The **bars** can be either horizontal or vertical.

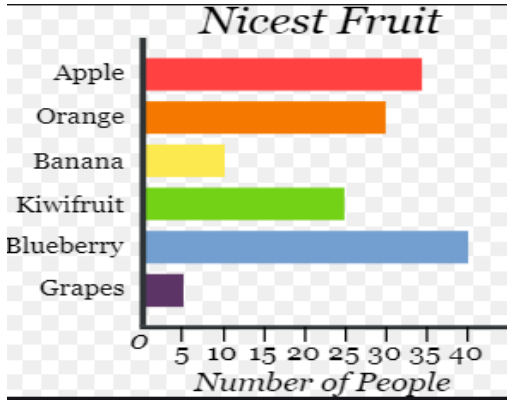
**Horizontal bar graph**- when the bars of the graph go across the graph (horizontal)

**Vertical bar graph**- when the bars of the graph go up and down on the graph (vertical)



This graph to the left is an example of a **vertical bar graph**, these are the most common type of bar graph.

Scale is on the side, unit is on the bottom.



This graph to the left is an example of a **horizontal bar graph**, these look most like tape diagrams.

Scale is on the bottom, unit is on the side.

These two different types of bar graphs have many similarities, many of them also being similar to line plots.

<u>Similarities</u>	<u>Differences</u>
<ul style="list-style-type: none"> <li>• Have a scale</li> <li>• Have a title</li> <li>• Labels</li> <li>• Units</li> </ul>	<ul style="list-style-type: none"> <li>• The direction of the bars</li> </ul>



**Creating a bar graph:**

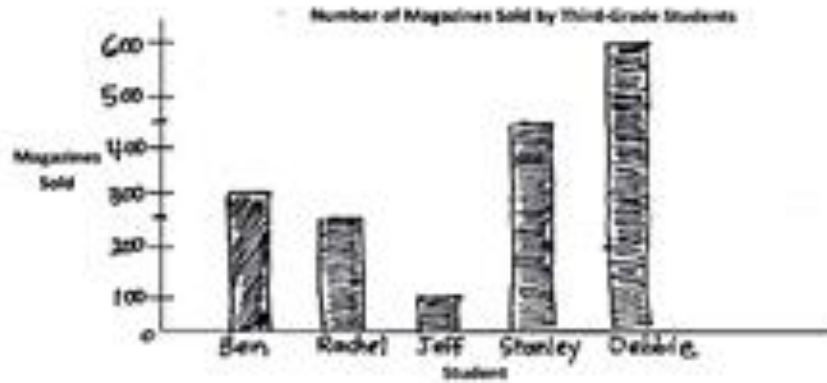
1. Draw a horizontal line for your number line (scale.)
2. Draw a vertical line, it should be the corner of the scale. (forms an L shape)
3. Where the 2 lines meet, mark with a 0
4. Look at your data to determine your scale, skip could be that number.
5. Fill in the unit, separate them evenly to allow enough room to draw each bar without them touching.

**Teacher model 1:**

1. The chart below shows the number of magazines sold by each student.

Student	Ben	Rachel	Jeff	Stanley	Debbie
Magazines Sold	300	250	100	450	600

a. Use the chart to draw a bar graph below. Create an appropriate scale for the graph.

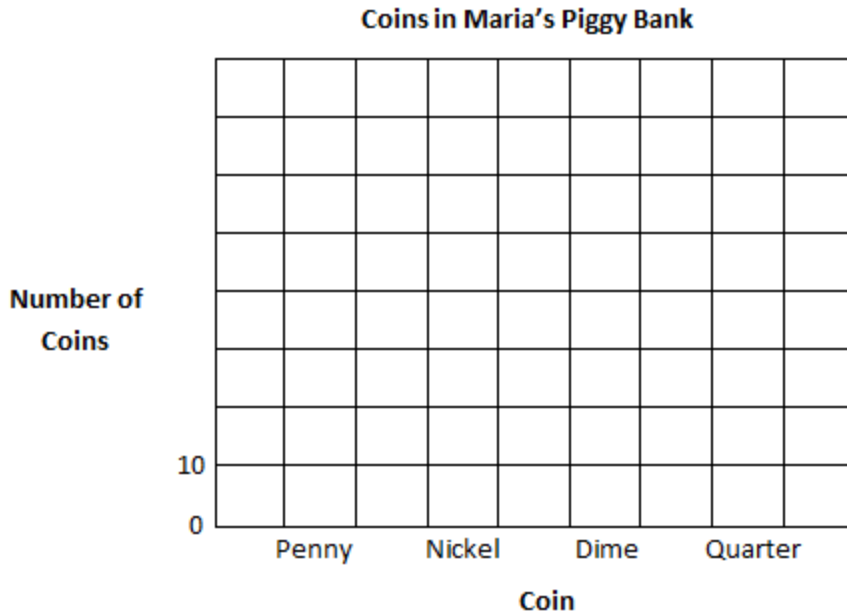


**CFU/Your Turn**

Directions: Fill in the tally chart with the number of tallies for each amount of coins.

Coins in Maria's Piggy Bank		
Coin	Tally	Number of Coins
Penny	### ### ### ### ### ### ### ### ### ### ### ### ###	
Nickel	### ### ### ### ### ### ### ### ### ### ### ###	
Dime	### ### ### ### ### ### ### ### ### ### ###	
Quarter	### ### ### ###	

Use this tally chart to create your own bar graph on the next page.



Answer the following questions based on the data.

- a. How many more pennies are there than dimes?
  
  
  
  
  
  
  
  
  
  
- b. Maria donates 10 of each type of coin to charity. How many total coins does she have left? Show your work.

**\*\*Dear Scholars, there is no exit ticket for today's lesson. Instead of sending me a picture of your completed exit ticket, please send me a picture of your completed CFU bar graph and answers to the questions that follow.\*\*** 😊



Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/22/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

### **LEQ: How do I analyze data to solve problems?**

**Objective: I can solve various types on problems by analyzing data that is provided to me in different forms.**

4<sup>th</sup> grade math standard:

3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets

3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

**Online support:**

**You can access videos to assist with the skills covered in this packet by visiting my YouTube channel at:**

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

## **Input/Guided Notes**

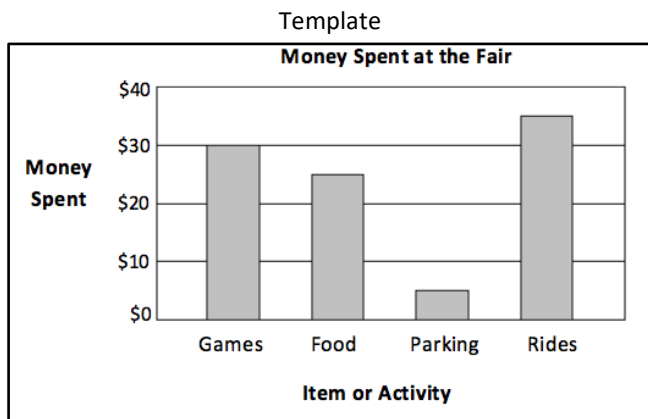
In the last few lessons we have been working on creating different types of graphs and solving questions based on the information that the graphs provide. Today you are being asked to **analyze data** and solve questions based on that data.

## What does it mean to analyze data?

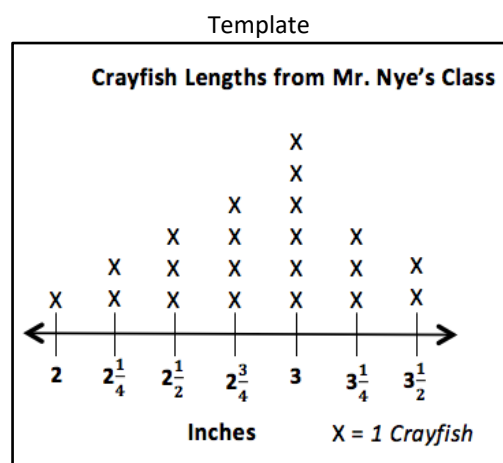
**Data analysis (or to analyze data)** is the process of interpreting the **meaning** of the **data** we have collected, organized, and displayed in the form of a table, bar chart, line graph, or other representation.

The two types of graphs we have looked at are line plots and bar graphs. These graphs are usually used for different types of data.

Bar Graphs	Line Plots
<ul style="list-style-type: none"> <li>▪ Number of fish in each tank</li> <li>▪ Number of students in each class</li> <li>▪ Amount of money saved each month</li> <li>▪ Number of magazines sold by each student</li> <li>▪ Number of visitors to a carnival each day</li> <li>▪ Number of coins in each piggy bank</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lengths of straws</li> <li>▪ Time spent outside over the weekend</li> <li>▪ Heights of children on a third-grade basketball team</li> <li>▪ Lengths of worms</li> <li>▪ Lengths of plants' roots</li> <li>▪ Heights of bean plants</li> <li>▪ Heights of sunflower plants</li> <li>▪ Widths of silver maple tree leaves</li> </ul>



Example of a vertical bar graph



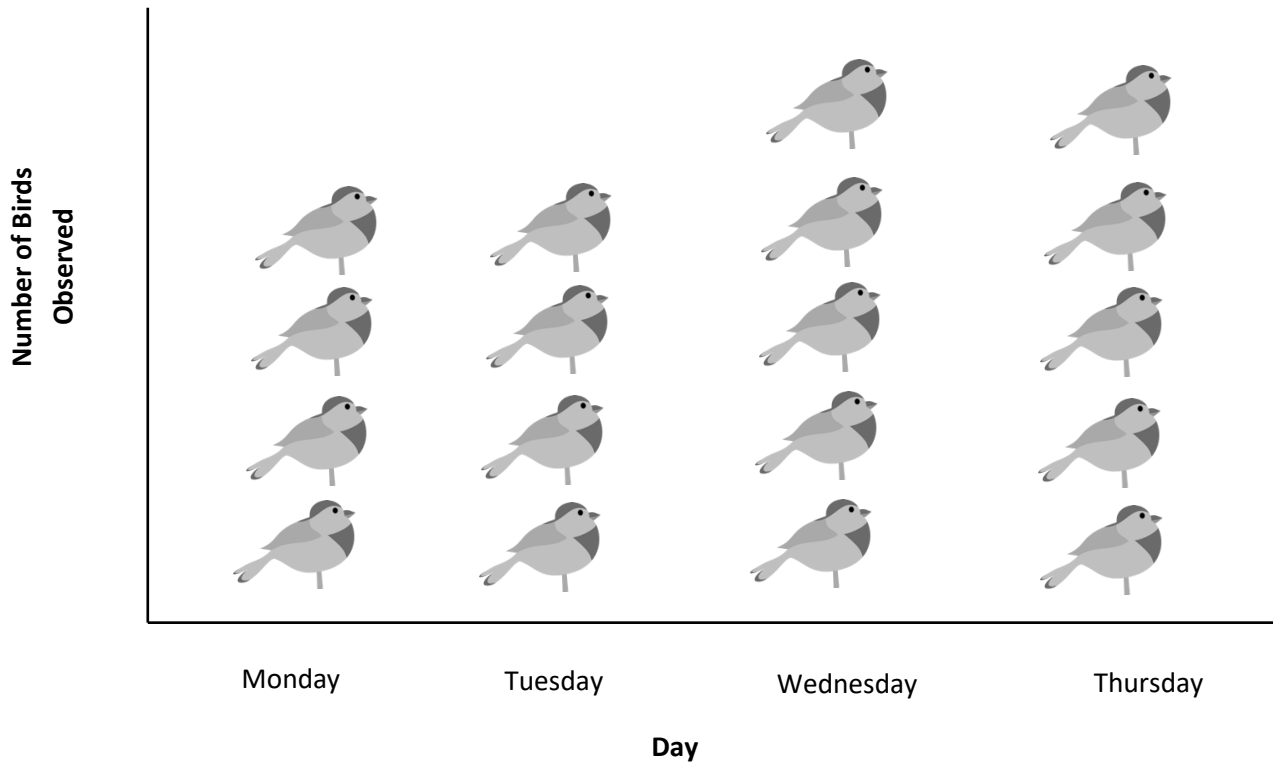
Example of a line plot

Another type of graph that we haven't discussed yet but that you might have heard of is a picture graph, also known as a picto-graph. This is a type of graph that uses pictures. A picture graph is most similar to a bar graph.

**Teacher model 1:**



**Number of Birds Mr. Gallagher's Class Observed**



One thing that a picture graph has that a bar graph or line plot do not have is a key.

**A key** tell us how much each picture in the graph is worth.

In a picture graph there is no scale, a key is used instead of a scale.

After analyzing the data in a picture graph, we can answer questions like the ones on the next page.

Remote learning lesson 37

- a. How many more birds did Mr. Gallagher’s class observe on Wednesday and Thursday than on Monday and Tuesday?

*Between Wednesday and Thursday I see a total of 10 birds. If I multiply that by 6 because that is what each bird is worth, I get 60 ( $6 \times 10 = 60$ )*

*Between Monday and Tuesday I see a total of 8 birds. If I multiply that by 6 I get 48. The question asks “how many more” which I know means to subtract.*

*$60 - 48 = 12$*

*Twelve more birds were seen on Wednesday and Thursday.*

- b. Mr. Manning’s class observed 104 birds. How many more birds did Mr. Gallagher’s class observe?

*There is a total of 18 birds in the graph. That means that Mr. Gallagher’s class observed 108 birds because  $18 \times 6 = 108$ .*

*Again I am being asked “how many more” so now I can subtract  $108 - 104$  and get 4.*

*Mr. Gallagher’s class observed 4 more birds.*

### CFU/Your Turn

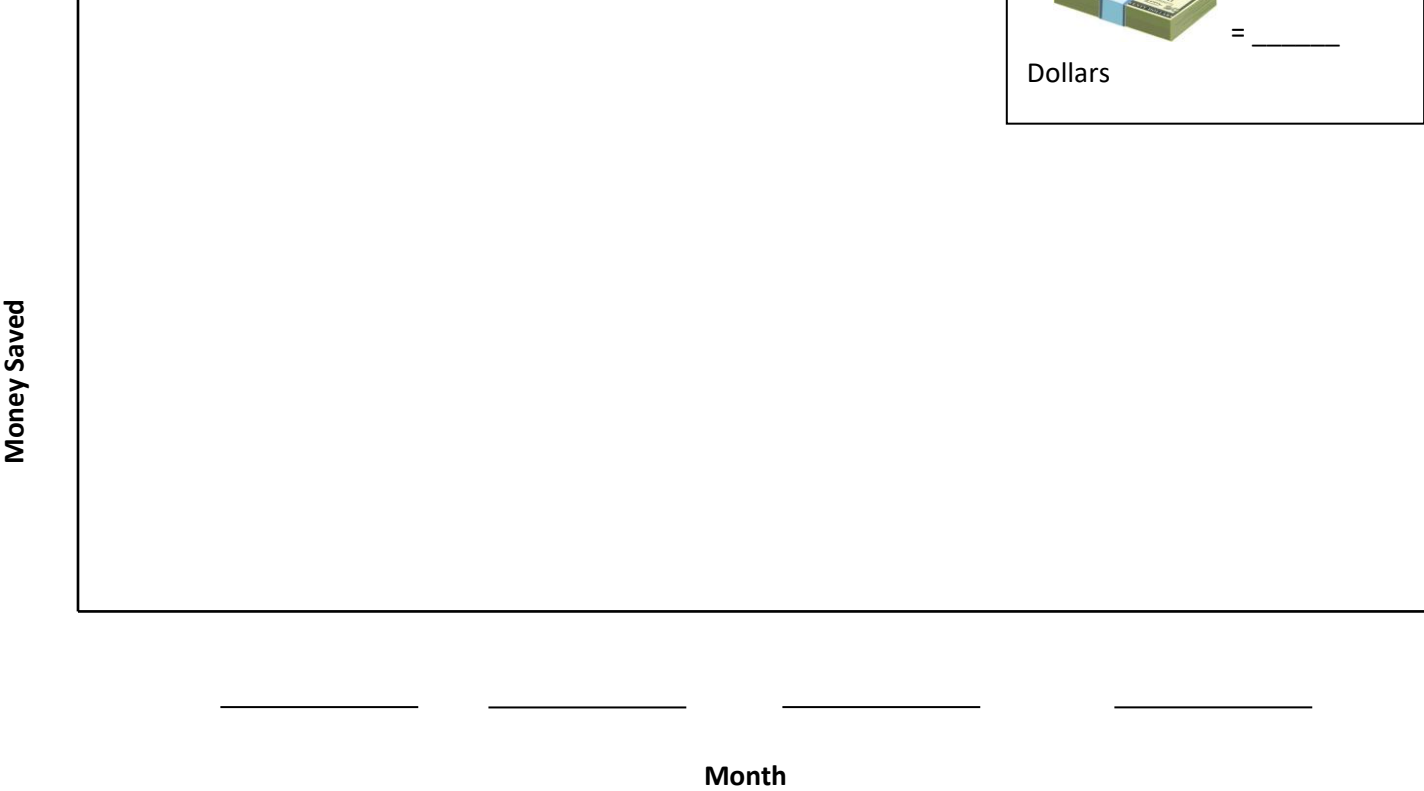
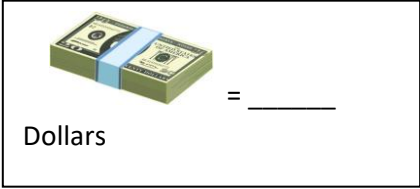
1. The table below shows the amount of money Danielle saves for four months.

Month	Money Saved
January	\$9
February	\$18
March	\$36
April	\$27

Create a picture graph on the next page using the data in the table.



**Money Danielle Saves**



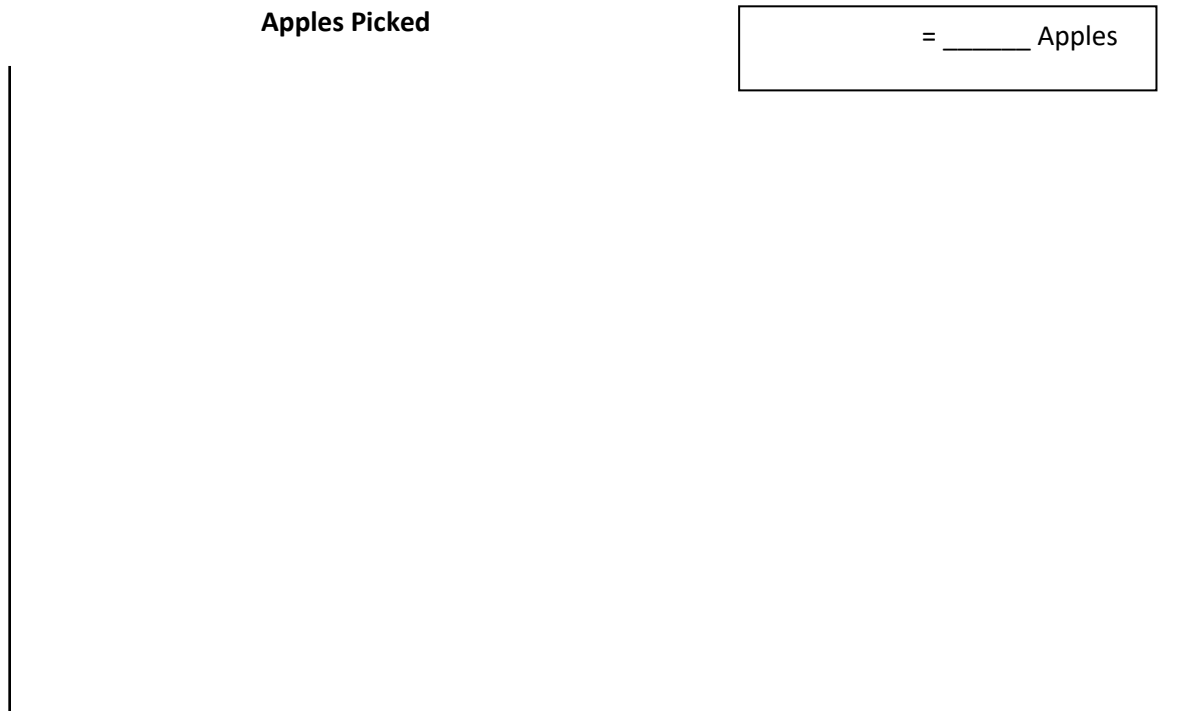
- a. How much money does Danielle save in four months?
  
  
  
  
  
  
  
  
  
  
- b. How much more money does Danielle save in March and April than in January and February?

## Exit Ticket

1. Four children went apple picking. The chart shows the number of apples the children picked.

Name	Number of Apples Picked
Stewart	16
Roxanne	_____
Trisha	12
Philip	20
<b>Total:</b>	72

- a. Find the number of apples Roxanne picked to complete the chart.
  
- b. Create a picture graph below using the data in the table.



Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...



# 4<sup>th</sup> Grade Math Scope and Sequence – Phase 5

## Week 9

May 25<sup>th</sup> - May 29<sup>th</sup>

Date	Standards <i>Identify CC standards that scholars would benefit from practice. Reflect back to CFU notes or past assessment data</i>	Description of Packet Assignment (30 minutes of work)	Online Assignment
5.25.20 Remote learning lesson 38	4.NF.3a: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will estimate sums and differences of mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>
5.26.20 Remote learning lesson 39	4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will add fractions to mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>
5.27.20 Remote learning lesson 40	4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will add mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.	On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.  Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.  <a href="https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTU MhHb-rYrx-MxWdGcCA?view_as=subscriber</a>

<p>5.28.20 Remote learning lesson 41</p>	<p>4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will subtract fractions from mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>
<p>5.29.20 Remote learning lesson 42</p>	<p>4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.</p>	<p>Scholars will read/interact with the guided notes that are provided (input) and then complete CFU independently. Today they will subtract mixed numbers from mixed numbers. They will use CUBES to solve an application problem and finally complete an exit ticket. Scholars/families will be asked to send me the answers to 1-2 questions on exit ticket via email or remind.</p>	<p>On this day, there will be a correlating prodigy assignment. Scholars will log into their prodigy accounts and work on a few selected questions based on this topic.</p> <p>Scholars can access support online by visiting my YouTube channel to see me solving questions from their packets and also different videos to support the skills they are working on.</p> <p><a href="https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber">https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA?view_as=subscriber</a></p>

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

Date: 5/25/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I estimate mixed numbers to find estimated sums and differences?**

**Objective: I can estimate mixed numbers to the nearest whole number by using what I know about benchmark fractions and then find the sums and differences of the estimates.**

4<sup>th</sup> grade math standard:

4.NF.3a: Understand addition and subtraction of fractions as joining and separating parts referring to the same whole..

Online support:

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## **Input/Guided Notes**

What does it mean to estimate?

To estimate means that we do not need an exact answer, we just need an answer that is close to the exact answer.

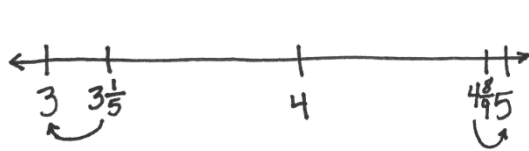
We have estimated (or rounded) whole numbers before. We used rules to help us decide whether we will round up or down. Today we are going to look at mixed

numbers and estimate them to the nearest whole number using what we know about fractions.

**Teacher Model 1:**

Let's estimate the sum of  $3\frac{1}{5} + 4\frac{8}{9}$ .

An **estimated sum** is the answer to an addition question AFTER the numbers have been estimated.



Here I have a number line. This number line is showing that  $3\frac{1}{5}$  is closest to 3 because if I think about fifths, there are 5 parts in a

whole and  $\frac{1}{5}$  is only 1 out of those 5 parts. This number is also showing me that  $4\frac{8}{9}$  is closest to 5 because if I think about ninths, there are 9 total parts in the whole and  $\frac{8}{9}$  is 8 out of those 9 pieces which is almost the whole thing.

After I have both mixed numbers estimated, now I can find the estimated sum by adding.

The estimated sum is:  $3 + 5 = 8$

What if I wanted to find the estimated difference?

An **estimated difference** is the answer to a subtraction question AFTER the numbers have been estimated.

I would still estimate each mixed number to the same whole number except now I would subtract  $5 - 3$  which equals 2. So I could say that the estimated difference is about 2.

**\*\*The way that we estimate each mixed number would not change.\*\***

**Teacher Model 2:**

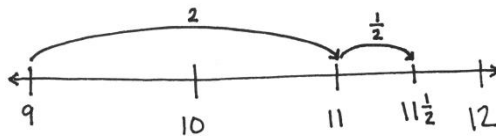
Find the estimated sum of:

$$8\frac{9}{10} + 2\frac{4}{8}$$

$8\frac{9}{10}$  can be estimated to 9. There are 10 tenths in a whole,  $9/10$  is 9 out of the 10 parts which is almost the whole thing.

If we look at  $2\frac{4}{8}$ , we know that  $4/8$  is equal to  $\frac{1}{2}$ . Instead of estimating this fraction we can simplify it to  $\frac{1}{2}$  and leave it like to add.  $2\frac{4}{8} = 2\frac{1}{2}$

$$9 + 2\frac{1}{2} = 11\frac{1}{2}$$



**Teacher model 3:**

$$\frac{15}{4} \text{ and } \frac{22}{7}$$

To see how to find the estimated difference of these 2 improper fractions tune in!

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

**CFU/Your Turn**

Directions: Estimate each sum or difference to the nearest half or whole number by rounding.

a.  $2\frac{1}{12} + 1\frac{7}{8} \approx$  \_\_\_\_\_

b.  $1\frac{11}{12} + 5\frac{3}{4} \approx$  \_\_\_\_\_

c.  $8\frac{7}{8} - 2\frac{1}{9} \approx$  \_\_\_\_\_

d.  $6\frac{1}{8} - 2\frac{1}{12} \approx$  \_\_\_\_\_

### **Application Problem**

Allison jogged on Sunday. When asked about her distance, Allison said, "I ran  $2\frac{7}{8}$  miles this morning and  $3\frac{3}{8}$  miles this afternoon. So, I ran a total of about 6 miles." Is she right? Explain.

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## Exit Ticket

Directions: Estimate each sum or difference to the nearest half or whole number by rounding.

1.  $2\frac{9}{10} + 2\frac{1}{4} \approx$  \_\_\_\_\_

2.  $11\frac{8}{9} - 3\frac{3}{8} \approx$  \_\_\_\_\_

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/26/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I add a fraction to a mixed number?**

**Objective: I can add a fraction to a mixed number using what I know about adding a fraction to a fraction.**

4<sup>th</sup> grade math standard:

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

Online support:

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**Input/Guided Notes**

Adding fractions to mixed numbers is very similar to adding a fraction to a fraction. The MOST important thing that you need to remember is that you ALWAYS have to add like units. What this means is we CANNOT add a fraction to a whole number, we can ONLY add a fraction to a fraction. Also remember, when we add fractions they MUST have common denominators.

Common denominators = the same denominator

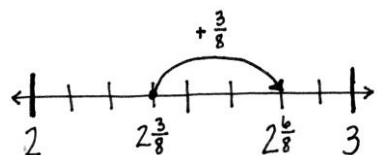


**Teacher Model 1:**

$$2\frac{3}{8} + \frac{3}{8} = 2\frac{6}{8} \text{ ( two and six eighths.)}$$

To solve the problem above we can add  $\frac{3}{8} + \frac{3}{8} = \frac{6}{8}$

Since  $\frac{6}{8}$  is less than 1 whole we can leave our answer just as it is.



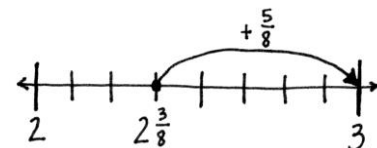
**Teacher Model 2:**

$$2\frac{3}{8} + \frac{5}{8}$$

To solve the problem above we need to add  $\frac{3}{8} + \frac{5}{8}$ . When we add these 2 fractions together we get an answer of  $\frac{8}{8}$ . Anytime the numerator and the denominator are the same the fraction is equal to 1 whole.

$$\frac{8}{8} = 1 \text{ so } 2 + 1 = 3$$

$$2\frac{3}{8} + \frac{5}{8} = 3 \text{ wholes}$$



**Teacher Model 3:**

$$5\frac{2}{4} + \frac{3}{4}$$

When we add the fractional units above together we get an answer of  $5\frac{5}{4}$ .  $5\frac{5}{4}$  is an improper fraction so that means that we can change it to a mixed number.  $5\frac{5}{4} = 1$  and  $\frac{1}{4}$

Now add,  $5$  and  $2\frac{2}{4} + 1$  and  $\frac{1}{4} = 6$  and  $\frac{3}{4}$

**Always add like units:**

**Ones + ones**

**Fractions + Fractions**

$$5\frac{2}{4} + \frac{3}{4} = 6\frac{3}{4}$$

To see more examples like the 3 in this lesson tune in!

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

**CFU/Your Turn**

<p>a. <math>4\frac{2}{3} + \frac{2}{3}</math></p>	<p>b. <math>3\frac{3}{5} + \frac{4}{5}</math></p>
<p>c. <math>5\frac{4}{6} + \frac{5}{6}</math></p>	<p>d. <math>\frac{7}{8} + 6\frac{4}{8}</math></p>

e. $\frac{7}{10} + 7\frac{9}{10}$	f. $9\frac{7}{12} + \frac{11}{12}$
-----------------------------------	------------------------------------

### **Application Problem**

One board measures 2 and  $\frac{3}{8}$  meters. Another measures 3 and  $\frac{4}{8}$  meters.  
What is the total length of the two boards together?

### **Exit Ticket**

Solve.

1.  $3\frac{2}{5} + \underline{\hspace{1cm}} = 4$

Hint: for this problem think about how many more fifths you would need to get to 1 whole and then add it to 3.

2.  $2\frac{3}{8} + \frac{7}{8}$

Parent Signature: \_\_\_\_\_

(Parent signature is proof that parent reviewed work with scholar)

<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/27/2020

BCCS-B

College: \_\_\_\_\_

Directions: Please complete the following lesson for today's review. Refer to the INPUT for support, these are my examples. When you are done, have a parent/guardian sign the last page upon completion of today's lesson and then complete the boxes.

-thank you 😊

**LEQ: How do I add a two mixed numbers?**

**Objective: I can add a mixed number to a mixed number by remembering that I can only add like units.**

4<sup>th</sup> grade math standard:

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction..

Online support:

**You can access videos to assist with the skills covered in this packet by visiting my YouTube channel at:**

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

**Input/Guided Notes**

When you are adding mixed numbers you have to remember that you can only add like units. You cannot add a whole number to a fraction. You can only add:

Whole + whole= whole

Fraction + fraction = fraction

When adding fractions your denominators MUST be the same.

### **Teacher Model 1:**

$$2\frac{1}{8} + 1\frac{5}{8}$$

The units in the problem above are ones and eighths. We can add ones + ones and eighths + eighths.

$$2 + 1 = 3 \text{ and } 1/8 + 5/8 = 6/8$$

So,  $2\frac{1}{8} + 1\frac{5}{8}$  is 3 and 6/8.

### **Teacher Model 2:**

$$2\frac{5}{8} + 3\frac{5}{8}$$

1. Add whole numbers:  $2 + 3 = 5$
2. Add fractions:  $5/8 + 5/8 = 10/8$
3. Change  $10/8$  to a mixed number.
4.  $10/8 = 1$  and  $2/8$
5.  $5 + 1$  and  $2/8 = 6$  and  $2/8$

$$2\frac{5}{8} + 3\frac{5}{8} = 6 \text{ and } 2/8$$

### **Teacher Model 3:**

$$5\frac{5}{8} + 6\frac{5}{8}$$

To see model 3 completed tune in!

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

## **CFU/ Your Turn**

a.  $1\frac{3}{5} + 3\frac{4}{5}$

b.  $2\frac{6}{8} + 3\frac{7}{8}$

c.  $3\frac{8}{12} + 2\frac{7}{12}$

## **Application Problem**

Marta has  $2\frac{80}{100}$  meters of cotton cloth and  $3\frac{87}{100}$  meters of linen cloth. What is the total length of both pieces of cloth?

## Exit Ticket

Solve.

1.  $2\frac{3}{8} + 1\frac{5}{8}$

2.  $\frac{4}{5} + 2\frac{3}{5}$

Parent Signature: \_\_\_\_\_

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<b>Parent/Scholar Notes: These are notes that can/should be shared with scholar's teacher</b>	
Today my scholar was successful with....	Today my scholar struggled with understanding...



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

Date: 5/28/2020

BCCS-B

College: \_\_\_\_\_

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-thank you 😊

**LEQ: How do I subtract a fraction from a mixed number?**

**Objective: I can subtract a fraction from a mixed number by using what I know about adding a fraction to a mixed number.**

4<sup>th</sup> grade math standard:

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction..

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**Input/Guided Notes**

Think back to when we worked on adding a fraction to a mixed number. We could only add like units meaning we could add ones to one and fractions to fractions. When we want to subtract a fraction from a mixed number we have to following the same rule:

Ones – ones = ones

Fraction – fraction = fraction

The difference with subtraction is that we have to make sure we have enough of the unit to subtract, if not, we have to make more.

For example:

$2/6 - 3/6$ . This is NOT a subtraction problem we can solve because we do not have enough of the unit sixths to subtract, we would have to make more. When we are subtracting the larger fraction always needs to come first just like when we subtract whole numbers.

**Teacher Model 1:**

This problem is asking us to subtract 3 fifths from 3 ones and four fifths.

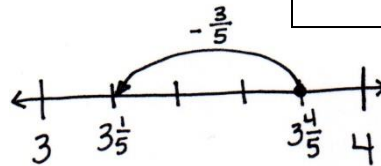
Can we do this? YES! We have enough of our unit, fifths.

$$3 \frac{4}{5} - \frac{3}{5}$$

$$\frac{4}{5} - \frac{3}{5} = 1 \text{ fifth}$$

$$3 \frac{4}{5} - \frac{3}{5} = 3 \text{ and } 1/5$$

Number line model



**Teacher Model 2:**

$$4 \frac{1}{5} - \frac{3}{5}$$

20 fifths + 1 fifth = 21 fifths  
 21 fifths - 3 fifths = 18 fifths = 18/5  
 18/5 = 3 and 3/5

In this equation above, we are being asked to subtract 3 fifths from 1 fifth which is something we CANNOT do. We DO NOT have enough fifths, we need to make more!

**How do we make more?**

To make more fifths we want to convert our 4 ones into fifths and add it to what we already have.

If there are 5 fifths in 1 whole than there are 20 fifths in 4 wholes.

1 whole = 5/5      4 wholes = 20/5

**Teacher Model 3:**  $3\frac{1}{5} - \frac{3}{5}$

To solve, we first look to see if we have enough of the unit in this case fifths. We do not have enough.

Make more fifths! 1 whole = 5 fifths    3 wholes = 15 fifths

15 fifths + 1 fifth = 16 fifths

16 fifths – 3 fifths = 13 fifths (  $13/5$ ) Now, change the improper fraction back to a mixed number.

$13/5 = 2$  and  $3/5$

**CFU/Your Turn**

$5\frac{3}{5} - \frac{4}{5}$	$5\frac{4}{6} - \frac{5}{6}$
$7\frac{1}{6} - \frac{5}{6}$	$4\frac{7}{10} - \frac{3}{10}$

### **Application Problem**

Meredith had  $2\frac{3}{8}$  meters of ribbon. She used  $\frac{5}{8}$  meters of the ribbon. How much ribbon did she have left?

### **Exit Ticket**

Solve.

1.  $10\frac{5}{6} - \frac{4}{6}$

2.  $8\frac{3}{8} - \frac{6}{8}$

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Today my scholar was successful with....	Today my scholar struggled with understanding...

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

Date: 5/29/2020

BCCS-B

College: \_\_\_\_\_

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-thank you 😊

**LEQ: How do I subtract a mixed number from a mixed number?**

**Objective: I can subtract a mixed number from another mixed number by using what I know about subtracting a fraction from a mixed number.**

4<sup>th</sup> grade math standard:

4.NF.3c: Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction..

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## **Input/Guided Notes**

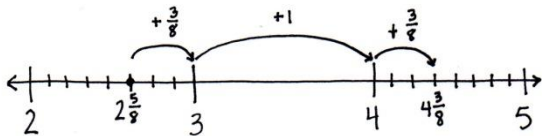
Yesterday we learned how to subtract a fraction from a mixed number. We learned that we can only subtract when we have enough of a unit. If we do not have enough then we MUST make more.

Two ways we can subtract mixed numbers is by:

- Counting up
- Subtracting like units

**Teacher Model 1:**  $4\frac{3}{8} - 2\frac{5}{8}$  (counting up method)

Draw a number line with endpoints of 2 and 5. Start at  $2\frac{5}{8}$  then count up to the next whole number (3). Then, count up to the next whole number in the question (4) and finally add the fraction  $\frac{3}{8}$ .



Finally, add the amounts on the top of the number line:

$$\frac{3}{8} + 1 + \frac{3}{8} = 1 \text{ and } \frac{6}{8}$$

$$\text{So, } 4\frac{3}{8} - 2\frac{5}{8} = 1 \text{ and } \frac{6}{8}$$

**Teacher Model 2:**  $11\frac{1}{5} - 2\frac{3}{5}$  (subtract like units method)

First subtract whole numbers:  $11 - 2 = 8$

This leaves us with 8 and  $\frac{1}{5} - \frac{3}{5}$ . Look at this equation that we are left with we DO NOT have enough fifths, so we make more.

$$1 \text{ whole} = 5 \text{ fifths} \quad 8 \text{ wholes} = 40 \text{ fifths}$$

$$40/5 + 1/5 = 41/5 \text{ Now we have plenty!}$$

$$41/5 - 3/5 = 38/5$$

Finally, change 38 fifths back to a mixed number.

$$38/5 = 7 \text{ and } 3/5$$

$$11\frac{1}{5} - 2\frac{3}{5} = 7 \text{ and } \frac{3}{5}$$

To see more teacher models like the ones above, tune in!

[https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable\\_polymer=1](https://www.youtube.com/channel/UCNuTUMhHb-rYrx-MxWdGcCA/videos?disable_polymer=1)

### CFU/Your Turn

$3\frac{1}{3} - 1\frac{2}{3}$	$5\frac{1}{4} - 2\frac{3}{4}$
$4\frac{1}{5} - 2\frac{4}{5}$	$5\frac{3}{7} - 3\frac{6}{7}$

### Application Problem

Jeannie's pumpkin had a weight of  $3\frac{7}{8}$  kilograms in August and  $4\frac{3}{8}$  kilograms in October. What was the difference in weight from August to October?



## Exit Ticket

Solve using any strategy.

1.  $4\frac{2}{3} - 2\frac{1}{3}$

2.  $12\frac{5}{8} - 8\frac{7}{8}$

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