



Module 1

Day 1

Create a “Get to Know Our Class” chart.

Student charts will vary.

Ask the students questions to gather data about the class and record the information on a chart. For example:

- How many students are in this class?
- How many students have brown eyes? (Blue eyes? Green eyes?)
- How many students in the class have black hair? (Brown hair? Blonde hair? Red hair?)

Day 2

Describe the class mathematically.

Student descriptions will vary.

- Remind students about yesterday’s Problem of the Day.
- Generate a list of 3-5 things students want to know about each other. For example:
 - Favorite ice cream flavor, favorite color, number of siblings, number of pets, favorite subject in school, month of birth, favorite sport, etc.

Day 3

Compare these fractions and explain how to locate them on a number line: $\frac{5}{8}, \frac{6}{8}, \frac{2}{8}, \frac{9}{8}, \frac{3}{8}$

Least to Greatest: $\frac{2}{8}, \frac{3}{8}, \frac{5}{8}, \frac{6}{8}, \frac{9}{8}$

Student explanations will vary. Look for:

- *The number line needs to represent values between 0 and 2 wholes.*
- *Each whole is partitioned into 8 equal parts.*
- $\frac{9}{8}$ is $\frac{1}{8}$ greater than one whole.
- *The numerator tells us the number of eighths to move on a number line starting from 0.*



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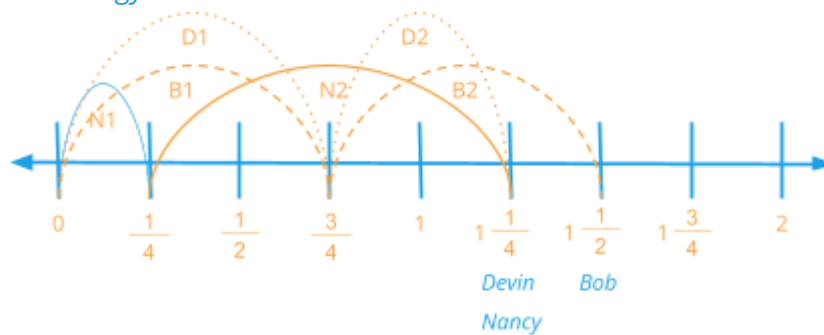
Day 4

Nancy, Bob, and Devin played a game to see who could get farthest on a number line. They each rolled a fraction cube. Nancy rolled $\frac{1}{4}$ and 1. Bob rolled $\frac{3}{4}$ and $\frac{3}{4}$. Devin rolled $\frac{3}{4}$ and $\frac{1}{2}$.

Where did each player land on the number line? Who won?

Nancy and Devin landed at $1\frac{1}{4}$. Bob landed at $1\frac{1}{2}$. Bob won.

Possible student strategy:





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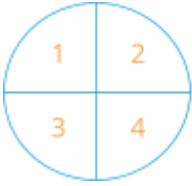
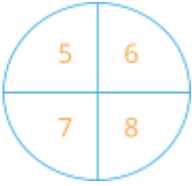


Module 2

Day 1

Joe the baker baked 2 apple pies for the Hughes family. There are 8 people in the Hughes family. The family shared the pies equally. How much pie did each family member get?

Each family member got $\frac{2}{8}$ or $\frac{1}{4}$ of an apple pie.

Possible student strategies:

				$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1 \text{ whole}$ <p>^ serves 4 family members</p> <p>2 whole will serve 4+4, or 8 family members.</p>
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Day 2

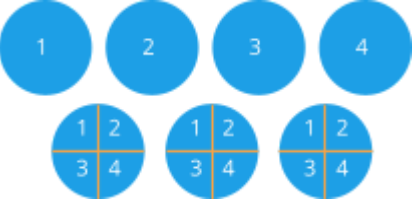
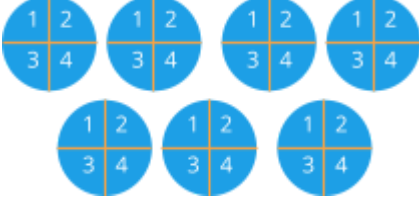
Joe the baker baked 7 apple pies to sell in his shop. Four people came in at the same time to buy some pies. Joe sold the 7 pies to the four people. Each person got an equal amount of pie. How much pie did each person buy?

Each person bought $1 \frac{3}{4}$ pies.

Possible student strategies:



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<p><i>Non-anticipatory Sharing</i> $1 + 1 + 1 + 1$</p> <p><i>Split the rest into $\frac{1}{4}$ pieces</i></p>  <p><i>Each person gets 1 whole pie and 3 $\frac{1}{4}$-pieces.</i></p>	<p>$\frac{1}{4}$ from each of 7 pies</p>  <p><i>Each person gets 7 $\frac{1}{4}$-pieces</i></p> <p><i>4 pieces can be combined to make 1 whole and there will be 3 leftover pieces.</i></p>	<p><i>7 pieces split between 4 people will give each person $\frac{7}{4}$ pies.</i></p>
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Day 3

Gordon baked a pan of lasagna for his family of 4. He cut the lasagna into eight equal pieces. Explain how much lasagna each family member might eat.

Student explanations will vary. Look for:

- *Equal-sized pieces (eighths)*
- *Different combinations of eighths, including leftovers at times.*
- *Comparisons are represented by $<$, $>$ or $=$ sign.*
- *Pieces are represented as eighths ($\frac{1}{8}$) or multiple eighths (such as $\frac{3}{8}$).*
- *Understanding that one whole piece of lasagna is $\frac{1}{8}$ of the whole lasagna.*

Day 4

Brett and 3 classmates were given a bulletin board to present their Math Challenge. They decided to divide the bulletin board so that each of them had an equal amount of space. Show two different ways they could partition the board. Prove that one partition from your first bulletin board example is equivalent to one partition from the second example.

Student solutions will vary. Look for:

- *Student bulletin boards should be partitioned into four equal sections, in two different ways.*

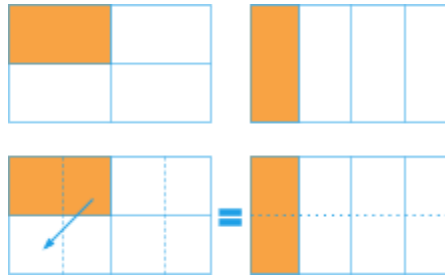


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- *To show equality, students may choose to partition the sections of the board into smaller pieces.*

Possible Student Representations





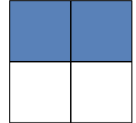
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Module 3

Day 1

Show and explain how the shaded part of this picture could represent each of these numbers: $\frac{1}{2}$, 2, 1



Student explanations will vary. Look for:


- $\frac{1}{2}$ of the 4 squares are shaded blue (or are not shaded).
- $\frac{1}{2}$ of the big square makes a blue (or white) rectangle.
- There are 2 squares shaded blue (or that are white).
- There is 1 big square that is broken into 4 smaller squares.
- 1 rectangle out of 2 horizontal rectangles are shaded.

Day 2

This rectangle is $\frac{1}{2}$.  Show one whole.

One Whole



This rectangle is $\frac{1}{3}$. Show $\frac{1}{2}$. 

One whole ($\frac{3}{3}$) is represented by 3 blue boxes.

$\frac{1}{2}$ is $1 \frac{1}{2}$ blue rectangles.





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Day 3

Jayla's and Jayvon's mother made them each a peanut butter sandwich for lunch. Jayla cut her sandwich into 4 equal-sized pieces and ate 2 of the pieces. Jayvon cut his sandwich into 2 equal-sized pieces and ate one piece. Jayla said she ate more of her sandwich because she ate 2 pieces. Jayvon disagreed. Who is correct? Justify your answer.

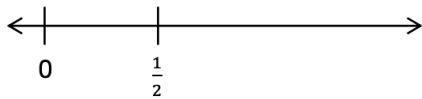
Jayvon is correct. Both Jayla and Javon ate the same amount of their peanut butter sandwiches.

Student explanations will vary. Look for:

- Jayla ate $\frac{2}{4}$ of her sandwich which is the same as $\frac{1}{2}$.
- Jayvon ate $\frac{1}{2}$ of his sandwich.
- Jayla and Jayvon ate the same amount.

Day 4

Place $\frac{3}{4}$ on this number line. Be as exact as possible.





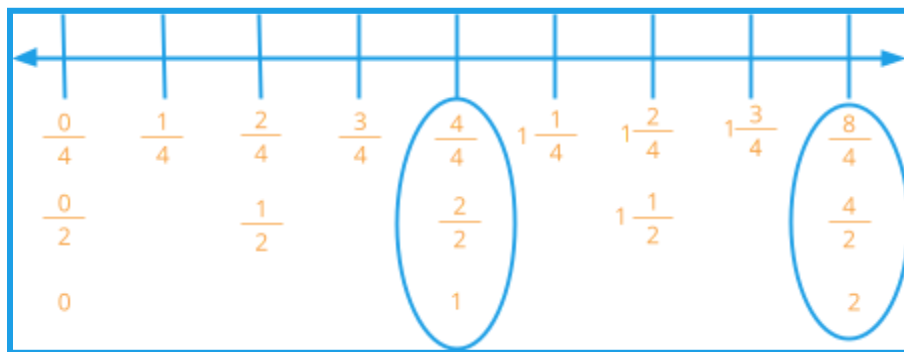
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Module 4

Day 1

Create a number line including the numbers 0 to 2 and all halves and fourths. Name every half and fourth. Circle all of the names for the locations of 1 and 2. Explain why these are equivalent.



Student explanations will vary. Look for:

- $\frac{4}{4}$, $\frac{2}{2}$, and 1 are different ways to represent 1, depending on how many pieces the whole is cut into.
- The denominator of a fraction tells us how many pieces 1 is partitioned into. The numerator of the fraction tells us how many of those pieces we have. If a number line is partitioned into 2 (or 4) pieces, and we have both (or all) of those pieces, it will make one whole.
- $\frac{8}{4}$, $\frac{4}{2}$, 2 wholes are different ways to represent 2, depending on how many pieces the wholes are cut into.
- If there are double the number of pieces that one whole is cut into, two wholes can be made.



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Day 2

Use your number line from yesterday or create a new one. Write 3 comparison statements and prove them on the number line. Example: $1 = \frac{4}{4}$ and $\frac{3}{4} > \frac{1}{2}$

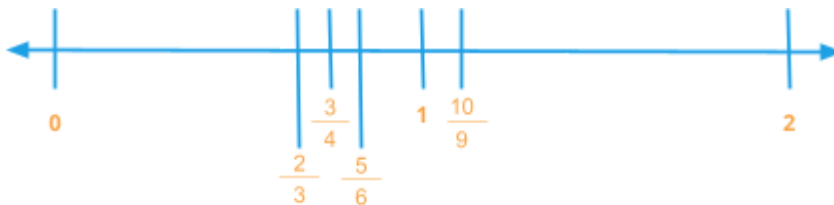
Student explanations will vary. Look for:

- Comparisons using fourths, halves, and whole numbers.
- $<$, $>$, $=$ signs to be used with accuracy.

Day 3

$\frac{5}{6}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{10}{9}$ Select the number closest to 1. Draw a number line and place it on your number line. Explain how you knew this number was closest to 1. Explain how you knew where to place the number on the number line.

$\frac{10}{9}$ is the closest number to 1.



Student explanations will vary. Look for:

- Each fraction is one piece away from 1.
- The fractions that have bigger denominators have smaller pieces because the whole is cut into more pieces.
- Ninths are the smallest of the given pieces. $\frac{10}{9}$ is one-ninth away from 1 whole, which means it will be the closest fraction to 1.



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Day 4

$\frac{7}{6}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{8}{9}$ Select the number closest to $\frac{1}{2}$. Draw a number line and place it on your number line. Explain how you knew this number was closest to $\frac{1}{2}$. Explain how you knew where to place the number on the number line.

$\frac{3}{8}$ is closest to $\frac{1}{2}$.



Student explanations will vary. Look for:

- $\frac{3}{8}$ is one-eighth piece away from $\frac{1}{2}$ ($\frac{4}{8}$).
- $\frac{1}{4}$ is one-fourth piece away from $\frac{1}{2}$, which is larger than one-eighth piece.
- $\frac{7}{6}$ is greater than one whole, which means it is more than one-half away from $\frac{1}{2}$.
- $\frac{8}{9}$ is one-ninth piece away from one whole, which means it is much closer to 1 than $\frac{1}{2}$, one-half piece away from a whole.



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Module 5

Day 1

Kiesha, Horatio, and Iris were seeing whose toy car would roll the farthest. They made a long track and marked it every fourth of a foot. Kiesha's car rolled $\frac{13}{4}$ foot, Horatio's car rolled $\frac{10}{4}$ foot, and Iris' car rolled $\frac{17}{4}$ foot. Whose car rolled the farthest? What was the order of the cars?

Iris' car rolled the farthest ($\frac{17}{4}$), followed by Kiesha's car ($\frac{13}{4}$) and then Horatio's car ($\frac{10}{4}$).

Day 2

Carlos, Lionel, Jamal, and Jane compared the amount of milk they drank at lunch. Carlos drank $\frac{3}{4}$ of his milk, Lionel drank $\frac{1}{4}$ of his milk, Jamal didn't drink any milk, and Jane drank $\frac{1}{2}$ of her milk. Compare the fraction of milk each person drank and put them in order from most milk drank to the least amount of milk drank.

Order from most to least: Carlos ($\frac{3}{4}$), Jane ($\frac{1}{2}$), Lionel ($\frac{1}{4}$), Jamal (0)

Possible Student Strategies

