



SUMMER ESSENTIALS

MATH PRACTICE BOOK Grade 5



Name: _____

Welcome to your Summer Essentials Practice Book! This book is designed to support your learning this summer during the weeks of June 29 - July 31. In this book you will have opportunities to:

- Practice and apply mathematics skills from the past school year
- Engage in open-ended creative tasks through Learning Quests

This practice book provides suggested mathematics learning activities for you to complete each weekday over the next five weeks. Take a few moments to look at the calendar on page 3 and explore the book with your family. An answer key is provided at the end of each week so that you can check your answers. Learning Quests are included for you at the end of the book. You can complete the quests and share your learning with family and friends. As you use this book, keep in mind:

- Practice books reinforce the most important skills needed for your next math course. It is recommended that you engage in this review this summer; practice books will not be collected or graded.
- Practice books are posted to FCPS 24/7 Learning Blackboard for families.
- You have the opportunity to attend one virtual office hour each week with a teacher from your school. Office hours are optional and give you the chance to receive help with the content in this practice book. Please contact your school if you have questions about office hour details.

Usen este enlace para obtener la información en español.

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استخدم هذا الرابط للوصول إلى المعلومات باللغة العربية.

请使用本链接获得中文信息。

از طریق این لینک برای دسترسی به این اطلاعات به زبان فارسی استفاده کنید.

이러한 정보를 한국어로 확인하려면 다음 링크를 이용하기 바랍니다.

اردو زبان میں معلومات حاصل کرنے کے لیے، یہ لنک استعمال کریں

Hãy dùng liên kết này để truy cập thông tin này bằng tiếng Việt :

Message to families: <https://www.fcps.edu/node/41224>

Learning Opportunities

Mathematics		Pages
Week 1	<ul style="list-style-type: none"> Solve single-step and multi-step practical problems with whole numbers 	4-10
Week 2	<ul style="list-style-type: none"> Recognize and name fractions in their equivalent decimal form and vice versa 	11-17
Week 3	<ul style="list-style-type: none"> Compare and order a set of fractions and decimals in both ascending and descending order Use models and reasoning to justify comparison or order of fraction and decimal sets 	18-24
Week 4	<ul style="list-style-type: none"> Solve single and multistep practical problems with decimals Use estimation to check reasonableness of a solution 	25-30
Week 5	<ul style="list-style-type: none"> Solve single-step practical problems involving multiplication of a whole number and a proper fraction with models 	31-36
Learning Quests		
Weeks 1-5	<ul style="list-style-type: none"> Design a paper airplane that can fly as far as possible Create unique characters from simple shapes 	37-39
COVID-19 Education		
Weeks 1-5	<ul style="list-style-type: none"> Identify common symptoms of COVID-19, how it is spread, and ways to help prevent infection 	40

Weekly Calendar

This calendar suggests practice activities for students to do each day. Every student works at a different pace. Please customize to meet the needs of your child and consider participating in Office Hours provided by your school as an additional support.

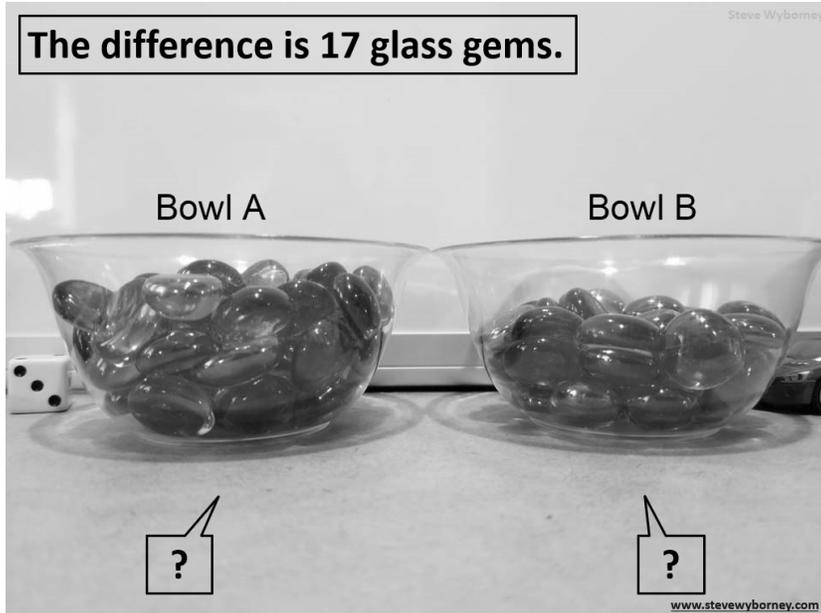
Monday	Tuesday	Wednesday	Thursday	Friday
Week 1: Problem Solving with Whole Numbers				
June 29 Estimation Clipboard; Problem-Solving Pages 4-5	June 30 Multiple Splat; Problem-Solving Practice Pages 6-7	July 1 Array Chat; Sharing Marbles Task Page 8	July 2 Multiplication Four in a Row Game Page 9	July 3 Weekly Reflection; Answer Key Page 10
Week 2: Fraction and Decimal Equivalencies				
July 6 Same and Different; Brownie Sharing Problems Pages 11-12	July 7 Which One Doesn't Belong; Fraction/Decimal Equivalence Pages 13-14	July 8 Convince Me That; Open Middle Task Pages 14-15	July 9 Fraction 3 in a Row Game Page 16	July 10 Weekly Reflection; Answer Key Page 17
Week 3: Comparing and Ordering Fractions and Decimals				
July 13 Which One is False?; Comparing and Ordering Practice Pages 18-19	July 14 Open Middle; Benchmark Fractions Pages 20-21	July 15 Same or Different; Jaguars vs. Cheetahs Pages 21-22	July 16 Ordering Fractions Game Page 23	July 17 Weekly Reflection; Answer Key Page 24
Week 4: Decimal Problem Solving				
July 20 Estimation Clipboard; Estimation with Problem-Solving Pages 25-26	July 21 How Many Ways?; Problem-Solving Pages 26-27	July 22 Which One is False; Grocery Store Task Page 28	July 23 Rounding Four in a Row Game Page 29	July 24 Weekly Reflection; Answer Key Page 30
Week 5: Fraction Multiplication				
July 27 Convince Me That; Fraction Multiplication Pages 31-32	July 28 Fraction Estimation; Fraction Problem- Solving Pages 32-33	July 29 Same and Different; Ice Cream Task Page 34	July 30 Fraction Tic-Tac- Toe Game Page 35	July 31 Weekly Reflection; Answer Key Page 36

Week 1: Problem Solving with Whole Numbers

Weekly Learning Outcome: I can solve single-step and multi-step practical problems with whole numbers.

Day 1: Estimation Clipboard

Directions: Use the picture and information to make **estimates** of the number of gems in each cup.
 Each bowl has some number of glass gems in it.
 The difference between the two bowls is 17.



I think there are _____ gems in Bowl A
 because _____

 _____.

I think there are _____ gems in Bowl B
 because _____

 _____.

Image from www.stevewyborney.com

Problem-Solving

Problem Solving: What questions do you ask yourself when you are solving problems and reflecting on your solution? (Refer to the Problem-Solving Chart on the next page)



You may use a calculator to solve these problems.

Model Problem (includes a problem-solving chart with possible responses):

Fiona and her 7 friends are cooking breakfast. Each person plans on eating 3 eggs. If an egg carton holds 12 eggs, how many egg cartons will they need?



Problem-Solving Chart			
What information do I know? 	What information do I still need to find out? 	What math operation(s) might help me get the information I need? + - x ÷	Reflection: How do I know if my answer is reasonable? 
*There are 8 people who are going to eat breakfast - Fiona plus her 7 friends.	*The total amount of eggs they are planning on eating.	*There are 8 people. Each friend will have 3 eggs. I can add $3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$ or multiply 8×3 to get 24 total eggs.	*If I use multiplication instead of division by multiplying 3 eggs times 12 eggs, would it make sense to have 36 eggs for breakfast with 8 people?
*Each person will eat 3 eggs and an egg carton holds 12 eggs.	*The total amount of egg cartons Fiona will need to have ready for each person to have 3 eggs.	*I have 24 eggs that can be divided into groups of 12 to get 2 egg cartons.	*It is more reasonable to have 2 cartons of eggs for 8 people.

Directions: Create a problem-solving chart on a separate piece of paper before working through the following problems:

Problem 1: Mrs. Wingo went on vacation for four weeks. When she returned, she had 825 unread emails. She decided to read and respond to 55 emails per day. She thinks that she will finish this task in 14 days. Is she correct or incorrect?



Mrs. Wingo is (correct or incorrect) because _____.

Problem 2: Zach and Johan played football for the Tigers this season. Zach scored a total of 18 touchdowns. A touchdown is worth 7 points. Johan scored 4 times as many points as Zach during the season. How many points did Johan score this season?



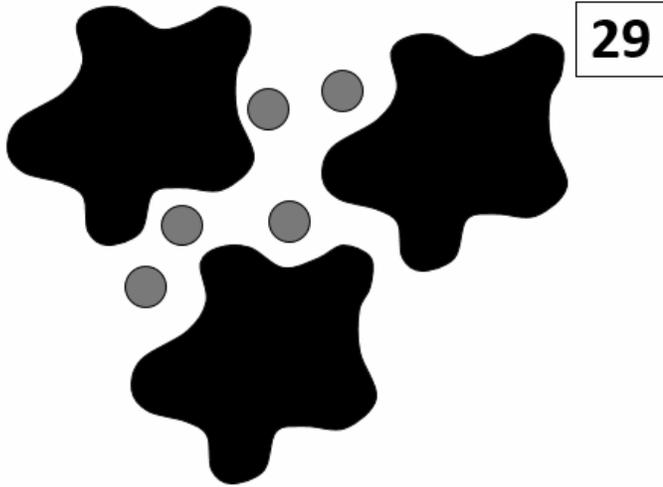
Johan scored _____ points this season.

Check and Reflect: Use page 10 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 2: Multiple Splat

Directions: There are a total of 29 circles. Some are hidden under the splats. How many are under each splat?



Explain your thinking using words and/or pictures.

www.stevewyborney.com

Steve Wyborney

Image from www.stevewyborney.com

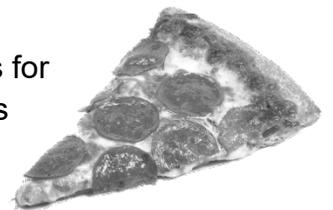
Problem Solving Practice

Problem Solving: What questions do you ask yourself when you are solving problems and reflecting on your solution?



You may use a calculator to solve these problems.

Model Problem: The teachers at Wolcott Elementary are going to order pizzas for the fifth-grade students. There are 129 students in fifth grade. A large pizza has 12 slices. How many pizzas will the teachers need to order so every student gets a slice?



Possible response: If there are 128 students and I divide by groups of 12, that will tell me the number of pizzas the teachers need to order. The quotient is 10.75 with .75 being the remainder. Since you cannot order .75 of a pizza, rounding up to the next whole number and ordering 11 pizzas is a more reasonable answer.

***If you end up with a remainder, think about the situation or context of the problem. You can express it as a fraction or decimal, ignore it, or round up to the next whole number.**

Directions: Create a problem-solving chart before working through the following problems:

Problem-Solving Chart			
<p>What information do I know?</p> 	<p>What information do I still need to find out?</p> 	<p>What math operation(s) might help me get the information I need?</p> <p>+ - x ÷</p>	<p>Reflection: How do I know if my answer is reasonable?</p> 

Problem 1: Marta has 40 cups of chocolate chips. She needs 3 cups to make a batch, or group, of chocolate chip cookies. If she uses all of the cups of chocolate chips, how many batches will she make?



She will make _____ batches of chocolate chips.

Problem 2: The 5th graders are going on a field trip. There are 6 classes and each class will bring a total of 32 people. Each bus can hold 51 passengers. How many buses will they need to make sure everyone gets to go on the trip?



They will need _____ buses to go on their trip.

Check and Reflect: Use page 10 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 3: Array Chat



Directions: Answer the questions based on the image.

1. **How many pieces of chalk do you see?**

I see _____ pieces of chalk.

2. **How did you get your answer?**

I got my answer by _____

 _____.

Summer chalk Twitter
 @kassiaowedekind. June 21, 2019.

Sharing Marbles Task



You may use a calculator to solve this problem. **Optional:** You can watch this short video introduction to the task: <https://bit.ly/2XsZG1A>



Benny has 425 red marbles, 537 blue marbles, 135 yellow marbles, and 256 green marbles. He wants to give the marbles away to four of his friends. Each friend will get the same amount.

How many marbles would each friend get? Explain how you know with numbers, words, and/or pictures.

Each friend would get _____ marbles.

How many marbles are left? _____ **marbles are left.**

Check and Reflect: Use page 10 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 4: Multiplication Four in a Row

Players: 1-3 players

Materials:

- 2 game markers (paper clips, buttons, beans, etc.)
- Crayon or colored pencil for each player



Directions:

- Player 1 places the **markers** on **two factors** and **colors the product** (the total amount in a multiplication problem).
- Player 2 **moves one marker** to a new factor and **colors the product**.
- Players continue until one player has colored **4 spaces in a row** horizontally, vertically, or diagonally.

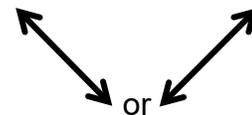
HORIZONTAL



VERTICAL



DIAGONAL



1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

Factors

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



Day 5: Weekly Reflection

You may use a calculator to solve these problems.

Problem 1: Simon and 6 friends worked at a lemonade stand together. They decided to share the earnings equally. They earned \$427 over the weekend. How much money will each person get?



Each person will get \$ _____.

Problem 2: Jennifer has 3 bookshelves that she needs to pack.

- The first bookshelf has 145 books.
- The second bookshelf has 93 books.
- The third bookshelf has 121 books.



Jennifer is going to put 45 books in each box. How many boxes does she need to pack up all of the books on the bookshelves?

Jennifer needs _____ boxes.

Problem 3: What helps you to be successful when solving story problems?

I am successful with solving story problems when I _____

Answer Key

Day 1	Estimation Clipboard: Answers will vary. Bowl A: 60 Bowl B: 43	Model problem: 2 egg cartons	1. She is incorrect. It will take 15 days 2. 504 points.
Day 2	Multiple Splat: 8 dots under each splat. Explanation may vary.	1. $13\frac{1}{3}$ batches	2. 4 busses
Day 3	Array Chat Estimate: 200 Actual: 199 (one section has 19 pieces of chalk)	4 friends get 338 with 1 left	
Day 5	1: \$61	2: 8 boxes	3: Answers will vary

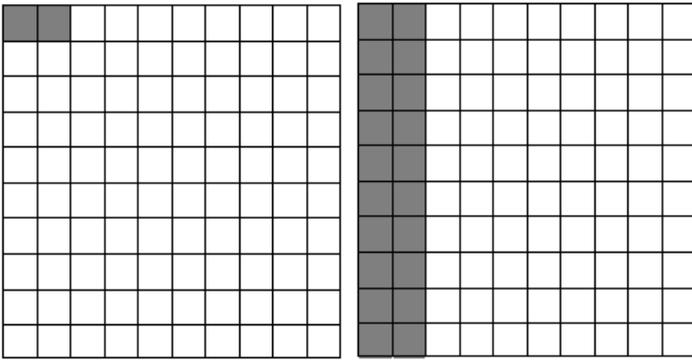
Week 1 Image Sources – WPClipArt: [egg carton](#); Clipart Library: [email](#), [football player](#), [pizza](#), [jar](#) (edited), and [bookshelf](#); Retrieved from Encyclopædia Britannica ImageQuest: [cookie](#), [school bus](#), and [lemonade stand](#).

Week 2: Fraction and Decimal Equivalencies

Weekly Learning Outcome: I can recognize and name fractions in their equivalent decimal form and vice versa.

Day 1: Same and Different

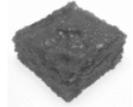
Directions: Look at the pictures. What is the same about them? What is different about them? Explain how you know.



These are the same because

These are different because

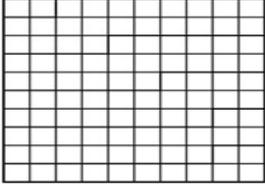
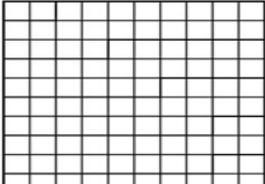
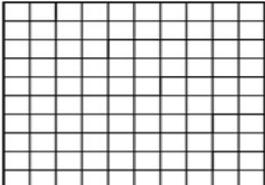
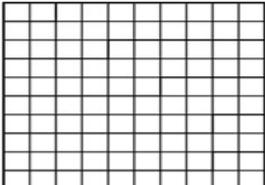
Brownie Sharing Problems



Grid models help us to see how decimals and fractions have **equivalent** values.

Real World Context	Decimal	Grid (One Whole)	Fraction
If two people share a brownie, how can we name each portion as a fraction and decimal?	0.5		$\frac{1}{2}$
If four people share a brownie, how can we name each portion as a fraction and decimal?	0.25		$\frac{1}{4}$
If eight people share a brownie, how can we name each portion as a fraction and decimal?	0.125		$\frac{1}{8}$

Directions: Read the problem. Fill in the grid and write the **equivalent** decimal and fraction.

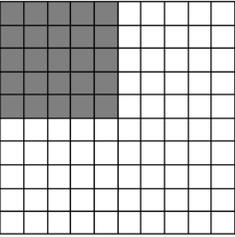
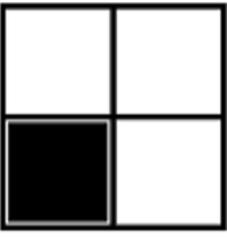
Real World Context	Decimal	Grid (One Whole)	Fraction
1) If five people share a brownie, how can we name each portion as a fraction and decimal?			
2) If four people share a brownie, how can we name three out of the four portions as a fraction and decimal?			
3) If eight people share a brownie, how can we name three out of the eight portions as a fraction and decimal?			
4) If three people share a brownie, how can we name each portion as a fraction and decimal? 			
5) What will happen when three people share a brownie? What do you notice? 	I notice that _____ _____ _____ _____		

Check and Reflect: Use page 17 to check your answers. What did you get correct? Can you work it a different way? What was incorrect?



Day 2: Which One Doesn't Belong

Directions: Look at the pictures. Which one doesn't belong? How do you know? See how many you can find.

<p>A</p> 		<p>B</p> 
<p>C</p> 		<p>D</p> $\frac{1}{4}$

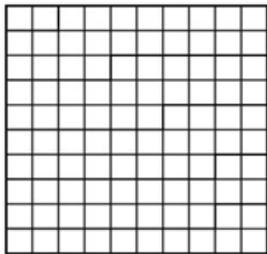
_____ does not belong because
 _____.

_____ does not belong because
 _____.

_____ does not belong because
 _____.

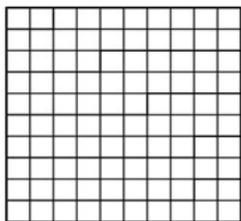
Fraction and Decimal Equivalence Practice

1) Represent $\frac{1}{2}$ on the grid. Then select all of the choices that are **equivalent** to this value.



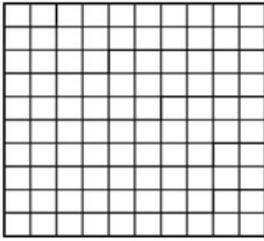
- a. 0.05
- b. $\frac{5}{10}$
- c. 0.50
- d. 5 hundredths
- e. $\frac{50}{100}$

2) Represent 0.60 on the grid. Then select all of the choices that are **equivalent** to this value.



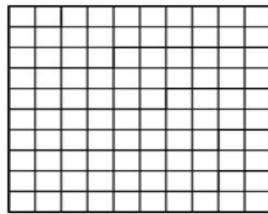
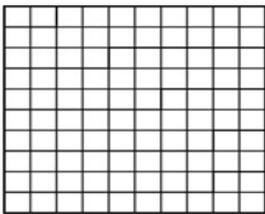
- a. $\frac{60}{100}$
- b. 0.600
- c. $\frac{3}{5}$
- d. 0.06
- e. 0.35

3) Represent $\frac{1}{3}$ on the grid. Then select all of the choices that are **equivalent** to this value.



- a. $\frac{4}{12}$
- b. 0.33
- c. $0.\overline{33}$
- d. $\frac{3}{10}$
- e. 0.30

4) Represent 1.75 on the grids. Then select all of the choices that are **equivalent** to this value.



- a. One and 75 tenths
- b. $1\frac{3}{4}$
- c. 1.075
- d. $1\frac{6}{8}$
- e. $1\frac{75}{100}$

Check and Reflect: Use page 17 to check your answers. What did you get correct? Can you work it a different way? What was incorrect?



Day 3: Convince Me That

Directions: Convince, or explain to, someone that $\frac{8}{10}$ is **equal** to 0.80

How do you know? How many ways can you convince that person that this is true?

$\frac{8}{10}$ is **equal** to 0.80 because...



Fraction and Decimal Equivalence Open Middle Task

Directions: Use the digits 0 to 9 to create an **equivalent** fraction and decimal number. **Each digit can only be used one time.**

$$\frac{\square}{\square} = \square.\square$$

Is there another way? How many can you find?

Way 2

$$\frac{\square}{\square} = \square.\square$$

Way 3

$$\frac{\square}{\square} = \square.\square$$

Can you find an **equivalent** fraction and decimal that is **greater than one whole**?

$$\frac{\square}{\square} = \square.\square$$

Check and Reflect: Use page 17 to check your answers. What did you get correct? Can you work it a different way? What was incorrect?



Day 4: Fraction 3 in a Row Game

Players: 1-3 players

Materials:

- 1 game marker (paper clip, button, bean, etc.)
- crayon or colored pencil for each player



Directions:

- Player 1 places the **marker** on a **fraction** and **colors one box with an equivalent representation**.
- Player 2 **moves the marker** to a new fraction and **colors one box with an equivalent representation**.
- Players continue until a player has colored **3 spaces in a row**: horizontal, vertical, or diagonal

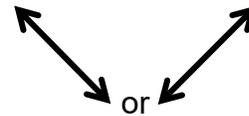
HORIZONTAL



VERTICAL



DIAGONAL



0.75	0.60	0.2	0.25	0.4			
$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{5}$	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{2}{5}$	$\frac{3}{5}$

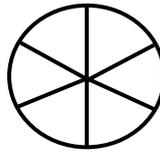
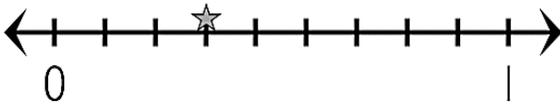
Day 5: Weekly Reflection

1) $\frac{2}{5}$ of the 5th graders at Charter Oak Elementary School participate in the band. Another 0.25 of the grade level participates in chorus. There are 100 students in 5th grade. How many 5th graders are **not** in the band or chorus? Express your solution as a **decimal**.



_____ of the students are not in the band or choir at Charter Oak Elementary School.

2) The model below represents a decimal. Shade in and name the fraction that is equivalent to the decimal.



The fraction equivalent is _____

3) Circle the statement that is **false**. How can you prove that the other statements are true?

$$\frac{5}{8} = 0.625$$

$$0.25 = \frac{2}{5}$$

$$1\frac{4}{8} = 1.50$$

4) How can a grid help you to see fraction and decimal values that are equivalent?

A grid can help me _____

Answer Key

Day 1	Same and Different: Answers will vary.	1. 0.2, $\frac{1}{5}$ 2. 0.75, $\frac{3}{4}$	3. 0.375, $\frac{3}{8}$ 4. $0.\overline{33}$, $\frac{1}{3}$ 5. Answers will vary. Example: Each person gets 3 tenths, then they each get 3 hundredths, and there is 1 hundredth left.
Day 2	Which doesn't Belong: Answers will vary	1. b, c, e 2. a, b, c	3. a, c 4. b, d, e
Day 3	Convince Me That: Answers will vary	Answers will vary. Examples include: $1: \frac{1}{2} = 0.5; \frac{1}{5} = 0.2; \frac{2}{5} = 0.4;$ $\frac{3}{5} = 0.6, \frac{3}{2} = 1.5, \frac{7}{2} = 3.5, \frac{6}{5} = 1.2, \frac{8}{5} = 1.6; \frac{9}{5} = 1.8$	
Day 5	1. 0.35 2. $\frac{2}{6}$	3. $0.25 = \frac{2}{5}$ is false	4. Answers will vary. Example: A grid can help me visualize the values of fractions and decimals.

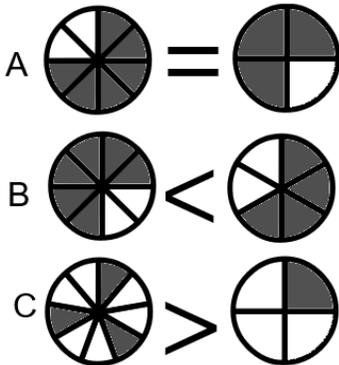
Week 2 Image Sources – Public Domain Clip Art: [brownie](#); Pics4Learning: [Student Jazz Band](#)

Week 3: Comparing and Ordering Fractions and Decimals

Weekly Learning Outcome: Compare and order a set of fractions and decimals in both ascending and descending order using models and reasoning to justify comparison or order.

Day 1: Which One is False?

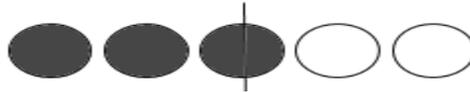
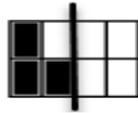
Directions: Look at the fraction comparisons. Circle the one that is **false** (not true).



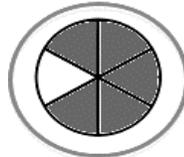
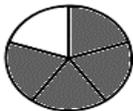
 I know that _____ is false because

Strategies for Comparing and Ordering Fractions and Decimals

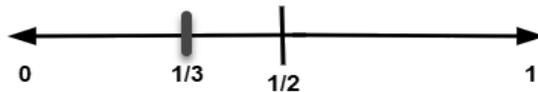
Decide if the number is **greater than** or **less than** $\frac{1}{2}$



Decide which of the values are closer to **one whole**



Think about where the numbers would belong on a **number line**



Use an **equivalent** decimal to compare values

$$\frac{3}{8} > \frac{1}{3} \text{ because } 0.375 \text{ is greater than } 0.\underline{3}\underline{3}.$$

Practice

Directions: Place each of the following numbers on the number line. Then answer the questions below.



$\frac{3}{4}$, 0.518, $\frac{7}{8}$, $\frac{3}{5}$, 0.70

1) Which number is the **greatest**? _____

2) Which number is the **least**? _____

3) Name two more **fractions** and two more **decimals** that could fit on this number line:

Fractions: _____ and _____ Decimals: _____ and _____

Comparing Fractions and Decimals using > (greater than), < (less than), = (equal to)

4) **Compare** the numbers using the **symbols** above

$$0.65 \text{ ____ } 0.385$$

$$1\frac{9}{10} \text{ ____ } 1\frac{4}{5}$$

$$\frac{5}{12} \text{ ____ } \frac{4}{6}$$

$$0.09 \text{ ____ } \frac{1}{10}$$

Ordering Fractions and Decimals

5) **Order** the set of numbers from **least to greatest**

$$\frac{1}{4}, 0.2, \frac{2}{5}, 0.04 \quad \text{______, ______, ______, ______}$$

6) **Order** the set of numbers from **greatest to least**

$$1.35, 2\frac{1}{3}, 2.03, 1\frac{3}{10} \quad \text{______, ______, ______, ______}$$

Check and Reflect: Use page 24 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 2: Open Middle

Directions: Use the digits 1 to 9, no more than once to create three fractions that are as close to zero, one half, and one as possible.

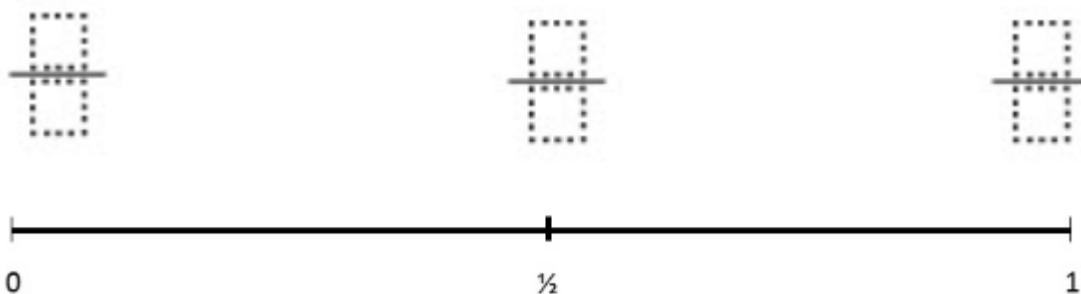
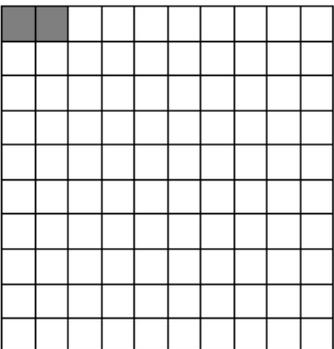
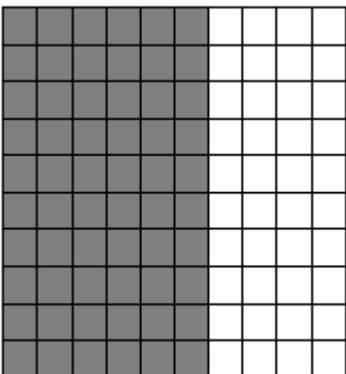
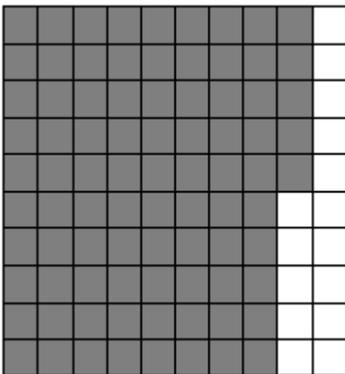


Image from: Open Middle [Benchmark Fractions](#)

Benchmark Fractions

Benchmark fractions can help us compare and order fractions by sorting and visualizing the value.

Closer to 0	Closer to $\frac{1}{2}$	Closer to 1
		
$\frac{2}{9}$ $\frac{1}{5}$ $\frac{1}{12}$	$\frac{5}{10}$ $\frac{3}{8}$ $\frac{5}{9}$	$\frac{9}{10}$ $\frac{4}{5}$ $\frac{7}{9}$
		

Benchmark Fraction Practice

Directions: Sort the following fractions into the Benchmark Fraction chart.

$\frac{2}{3}$ $\frac{1}{10}$ $\frac{4}{8}$ $\frac{7}{10}$ $\frac{8}{9}$ $\frac{3}{5}$ $\frac{2}{12}$ $\frac{1}{6}$ $\frac{7}{12}$ $\frac{5}{6}$ $\frac{2}{7}$ $\frac{5}{12}$ $\frac{1}{9}$ $\frac{11}{12}$

Closer to 0	Closer to $\frac{1}{2}$	Closer to 1

Check and Reflect: Use page 24 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 3: Same and Different

Directions: Look at the numbers. What is the same about them? What is different about them? Explain how you know.

$\frac{3}{2}$ 1.5

These are the same because

These are different because

Jaguars vs. Cheetahs

Students participated in a 15-minute race to see how far they could run. Below are the results of two competing teams.

Jaguars	
Sarah	1.45 miles
Jose	1.7 miles
Theo	0.95 miles

Cheetahs	
Jason	$\frac{7}{8}$ miles
Kenneth	$1\frac{1}{2}$ miles
Ayana	$1\frac{4}{5}$ miles

The Jaguars and Cheetahs need your help! There are six runners, in all. Use the information in the tables above to determine who earned 1st through 6th place. The student who ran the **farthest** will earn first place. Explain your answer using pictures, words, and/or numbers.



1st Place	2nd Place	3rd Place	4th Place	5th Place	6th Place

Image - Clipart Library: [Race](#)

Check and Reflect: Use page 24 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 4: Ordered Fractions Game

Players: 2 players

Materials:

- Create cards with the digits 1-9
- Pencil or pen for each player

1	2	3
4	5	6
7	8	9



Sample Game Board

0
$\frac{3}{8}$
2

Directions:

- Player 1 picks two digit cards and forms a fraction between 0 and 2.
 Example: If the digits 8 and 3 are picked, the player would choose $\frac{3}{8}$ since $\frac{8}{3}$ is not between 0 and 2.
- Player 1 writes the fraction in an empty box on their game board.
Keep in mind that the fractions should be in order from least to greatest.
- Players 2 repeats the same steps.
- A player loses a turn if the digits cannot form a fraction that can be placed in any of the remaining boxes.
- Play continues until one player correctly completes a pathway that is in order from least to greatest.

Player 1

0
2

Player 2

0
2

Game adapted from *Nimble with Numbers Grades 5-6*

Day 5: Weekly Reflection

1) **Compare** each problem and **circle** True or False.

A. $\frac{1}{2} = 0.12$

True or False

B. $\frac{3}{8} < 0.78$

True or False

C. $0.4 > \frac{1}{4}$

True or False

D. $\frac{5}{8} < 0.5$

True or False

2) The box on the left is for numbers **less than** $\frac{1}{2}$. The box on the right is for numbers **greater than** $\frac{1}{2}$.
Write three fractions or decimals in each box.

Less than $\frac{1}{2}$

Greater than $\frac{1}{2}$

3) **Order** this set of numbers from **greatest to least**.

$2\frac{4}{5}$

2.303

$2\frac{3}{4}$

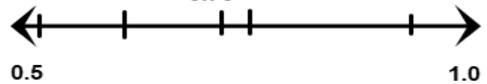
2.78



4) **How can representations, pictures, and/or benchmark numbers be used to justify, or explain, the comparison or order of a set of fractions and decimals?**

Representation and/or benchmark numbers can be used to justify the comparison or order of fractions and decimals because _____

Answer Key

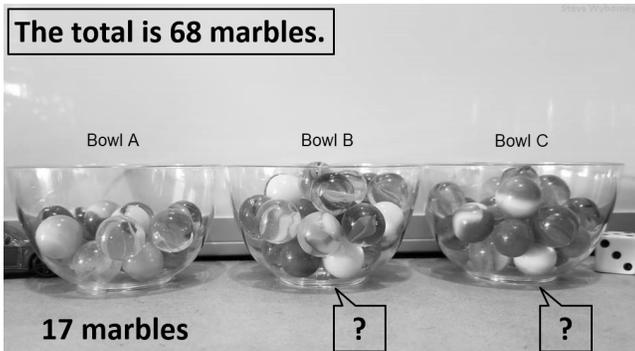
Day 1	<p>Which One is False? B is false. Reasons will vary.</p>	<p>Application: Your number line might look like this:</p> <div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="margin-right: 10px;">0.518</div> <div style="margin-right: 10px;">$\frac{3}{5}$</div> <div style="margin-right: 10px;">0.70</div> <div style="margin-right: 10px;">$\frac{3}{4}$</div> <div style="margin-right: 10px;">$\frac{7}{8}$</div> <div style="margin-left: 10px;">1.0</div> </div>  <p>1. $\frac{7}{8}$ 2. 0.518</p> <p>3. Answers will vary. Examples: $\frac{2}{3}$, $\frac{5}{8}$, 0.68, 0.943</p> <p>4. $0.65 > 0.385$; $1\frac{9}{10} > 1\frac{4}{5}$; $\frac{5}{12} < \frac{4}{6}$; $0.09 < \frac{1}{10}$ 5. 0.04, 0.2, $\frac{1}{4}$, $\frac{2}{5}$</p> <p>6. $2\frac{1}{3}$, 2.03, 1.35, $1\frac{3}{10}$</p>
Day 2	<p>Open Middle: $\frac{1}{9}$, $\frac{2}{4}$, $\frac{7}{8}$</p>	<p>Benchmark Fractions:</p> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="text-align: center;"> <p>Closer to 0</p> <p>$\frac{1}{10}$, $\frac{2}{12}$, $\frac{1}{6}$, $\frac{2}{7}$, $\frac{1}{9}$</p> </div> <div style="text-align: center;"> <p>Closer to $\frac{1}{2}$</p> <p>$\frac{2}{3}$, $\frac{4}{8}$, $\frac{7}{10}$, $\frac{3}{5}$, $\frac{7}{12}$, $\frac{5}{12}$</p> </div> <div style="text-align: center;"> <p>Closer to 1</p> <p>$\frac{5}{6}$, $\frac{8}{9}$, $\frac{11}{12}$</p> </div> </div>
Day 3	<p>Same and Different Answers will vary</p>	<p>Jaguars vs. Cheetahs: Ayana, Jose, Kenneth, Sarah, Theo, Jason</p>
Day 5	<p>Weekly Reflection: 1. A-False B-True C-True D-False 2. Answers will vary Examples: Less than $\frac{1}{2}$: $\frac{1}{2}$, $\frac{1}{6}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{1}{3}$; Greater than $\frac{1}{2}$: $\frac{5}{6}$, $\frac{3}{5}$, $\frac{4}{5}$, $\frac{2}{3}$ 3. $2\frac{4}{5}$; 2.78; $2\frac{3}{4}$; 2.303 4. Answers will vary. Example: Benchmark fractions and representations help to visualize the value of a fraction.</p>	

Week 4: Decimal Problem Solving

Weekly Learning Outcome: Solve single and multistep practical problems with decimals and use estimation to check reasonableness of a solution.

Day 1: Estimation Clipboard

Directions: Estimate the amount of marbles in Bowl B and Bowl C knowing that there are 68 marbles total in all three bowls. There are 17 marbles in Bowl A.



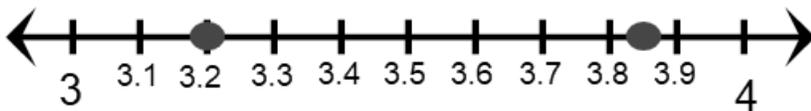
I think there are _____ marbles in Bowl B
because _____
_____.

I think there are _____ marbles in Bowl C
because _____
_____.

Estimation with Problem Solving

A number line can help us determine the value when rounding.

Example: Jen purchased 3.2 pounds of strawberries and 3.85 pounds of apples. **About** how much fruit did Jen purchase **altogether**?



Looking at the number line, 3.2 is closer to 3 so it is **about** 3. 3.85 is closer to 4 so it is **about** 4. The total is **about 7 pounds of fruit**.

Problem 1: Marvin ran 6.2 miles on Monday, 4.75 miles on Tuesday, and 5.5 miles on Friday. **About** how far did Marvin run **in all**?

Marvin ran about _____ miles.



Problem Solving



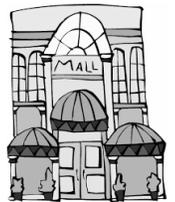
Directions: Solve the problems below.

You may use a calculator to solve these problems.

- Remember to create the problem-solving chart below on a separate piece of paper to help you think through the problem
- Remember to use estimation to check the reasonableness of your solution

Problem-Solving Chart			
What information do I know? 	What information do I still need to find out? 	What math operation(s) might help me get the information I need? + - X ÷	Reflection: How do I know if my answer is reasonable?

Problem 1: Tammy went to the mall with her 2 friends. Each person bought the same shirt for \$9.95 and the same pants for 12.61, including tax. Before leaving the mall, they shared a large pizza for \$7.95 and split the bill evenly. How much money did each person spend at the mall? How much money did Tammy and her 2 friends spend in all?



Each person spent \$ _____ at the mall. Tammy and her 2 friends spent \$ _____ in all.

Problem 2: Josue’s toy box can hold up to 20 pounds of weight. His blocks weigh 12.07 pounds, his toy cars weigh 4.52 pounds, and his animals weigh 1.83 pounds. How much weight does he have left to use before going over the 20-pound weight limit?



Josue has _____ pounds of weight to use before going over the 20-pound weight limit.

Problem 3: Mira and Brayden are going to the lake this weekend. The lake is 80.46 miles away from their home. They plan to stop at a scenic overview on the way to the lake which adds 5.35 miles to their trip. Mira and Brayden want to share the driving evenly. How many miles will each person drive for the entire trip to and back from the lake?



Each person will drive _____ miles.

Check and Reflect: Use page 30 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 3: Which One is False?

Directions: Read the choices below. Determine which choice is **false** (not true). You may **not** use a calculator for this problem.



- A. $0.55 \times 6 = 3.3$
- B. $1.5 \times 4.1 = 6.15$
- C. $0.8 \times 40 = 32$
- D. $7.3 \times 0.9 = 0.65$

 I know that _____ is false because _____

Grocery Store Task

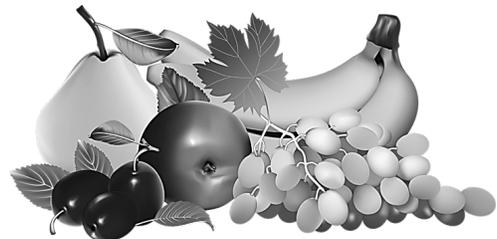


You may use a calculator for this task.

Emma's mom gave her \$25 and asked her to purchase fruit at the grocery store.

Fruit	Cost
Bananas	\$0.41 per pound
Strawberries	\$2.99 per pound
Apples	\$1.50 per pound
Blueberries	\$4.59 per pound

Emma wants to purchase **at least** 1 pound of each fruit. How many pounds of each fruit could she purchase to get as close to \$25 as possible?



Emma could purchase:

- _____ pounds of bananas for a total of \$ _____
- _____ pounds of strawberries for a total of \$ _____
- _____ pounds of apples for a total of \$ _____
- _____ pounds of blueberries for a total of \$ _____

Emma spent a total of \$ _____ and has \$ _____ left.

Check and Reflect: Use page 30 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 4: Rounding Four in a Row

Players: 1-3 players

Materials:

- 1 game marker (paper clips, buttons, beans, etc.)
- Crayon or colored pencil for each player



Directions:

- Player 1 places the **marker** on a **rounded number** and **colors a number on the board that would round to that number.**
- Player 2 **moves the marker** to a new rounded number and **colors a number that would round to that number.**
- Players continue until one player has colored **4 spaces in a row:** horizontal, vertical, or diagonal.

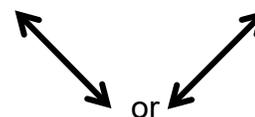
HORIZONTAL



VERTICAL



DIAGONAL



5.1	4.951	4.03	4.82	4.73	4.201
4.97	4.407	4.571	4.539	4.18	4.48
4.51	4.28	4.832	4.389	4.24	4.33
4.398	4.547	4.97	4.301	4.65	4.999
4.191	4.87	4.861	4.441	4.741	4.89
4.06	4.009	4.761	4.45	4.315	5.08

Rounded Number

4	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	5
---	-----	-----	-----	-----	-----	-----	-----	-----	-----	---

Day 5: Weekly Reflection



You may use a calculator to solve these problems.

Problem 1: Select 3 different numbers that can round to 77.5. **Example:** 77.46

First Number:	Second Number:	Third Number:
---------------	----------------	---------------

Problem 2: What is a reasonable estimate for the **product**, the total amount in a multiplication problem, of 5.72 and 0.9? **A reasonable estimate is** _____.

Problem 3: Michelle ran 1.26 miles on Monday, 3.77 miles on Tuesday, and 5.03 miles on Wednesday of this week. She hopes to run 15 miles by Friday. What possible distances can she run on Thursday and on Friday to achieve her goal?



Michelle could run _____ miles on Thursday and _____ miles on Friday.

Problem 4: What strategies help you to round and/or estimate with decimal numbers?

A strategy that helps me is _____

Answer Key

Day 1	Estimation Clipboard Answers vary. Examples: 25, 26 and 20, 31	Estimation & Problem-Solving 1. 17 miles; 2. \$16; 3. \$40; 4. 3
Day 2	How Many Ways? 0.714, 0.741, 1.074, 1.470	Problem Solving: 1. \$25.21 per person. \$75.63 in all; 2. 1.58 pounds; 3. 83.135 miles.
Day 3	Which one is false? D. Explanations will vary.	Grocery Store Task Answers will vary. Example: 5 pounds of bananas, 2 pounds of strawberries, 2 pounds of apples, 3 pounds of blueberries. Total: \$24.80 Change: \$0.20
Day 5	1. Answers may vary. Examples: 77.47, 77.51, and 77.508; 2. 6; 3. Answers may vary. Example: Michelle has 4.94 miles to run to get to 15 miles. She could run 2.26 miles on Thursday and 2.68 miles on Friday to achieve her goal; 4: Answers may vary. Example: I put my decimal on a decimal grid to identify the nearest whole number. That helps me to round my numbers to the closest whole number.	

Week 4 Image Sources – Clipart Library: [Strawberries](#), [Apples](#), [Runner](#), [Mall](#), [Scooter](#), [Donuts](#), [Toy Box](#), [Travel Car](#), [Fruit](#)

Week 5: Fraction Multiplication

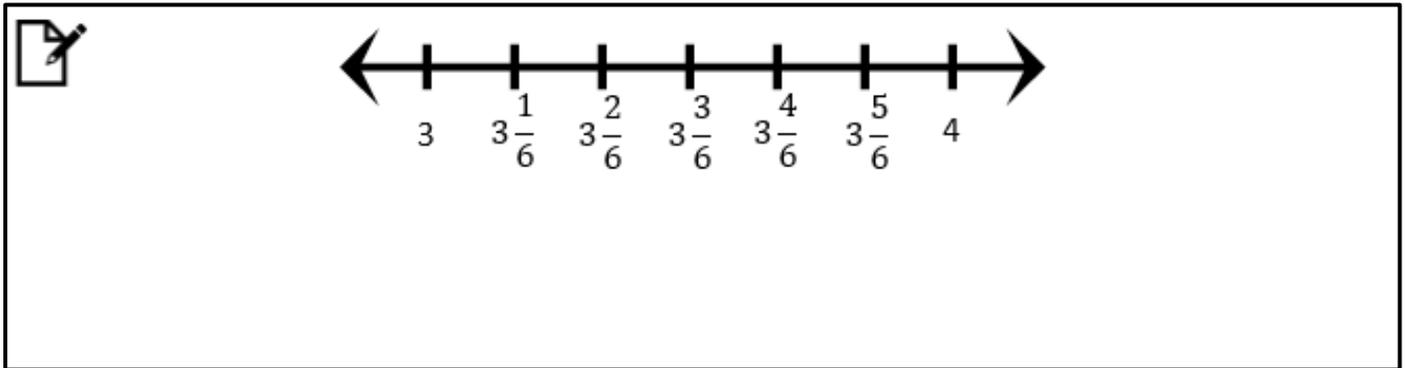
Weekly Learning Outcome: Solve single-step practical problems involving multiplication of a whole number and a proper fraction with models.

Day 1: Convince Me That

Directions: Convince (or prove to) someone that the statements below are true. How do you know? How many ways can you convince them this is true?

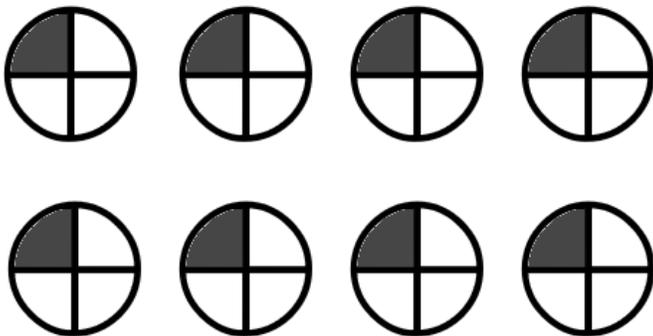
$3\frac{2}{6}$ when rounded to the nearest whole is 3.

$3\frac{5}{6}$ when rounded to the nearest whole is 4.



Fraction Multiplication Models

Example:



Equation: $8 \times \frac{1}{4} = \frac{8}{4} = 2$

Directions: Complete the equation modeled.

1)



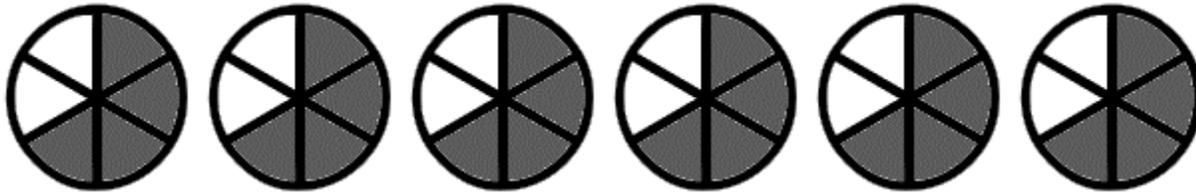
Equation: _____ x _____ = _____

2)



Equation: $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

3)



Equation: $\frac{5}{6} \times \frac{5}{6} = \frac{25}{36}$

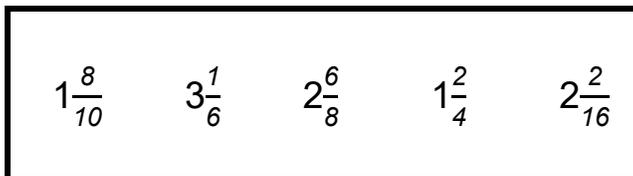
4) Create a model and solve the equation. $5 \times \frac{3}{5} = \underline{\hspace{2cm}}$



Check and Reflect: Use page 36 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?

Day 2: Fraction Estimation

John found the sum of two numbers is **about** 5. Which two numbers from the list below could he have chosen?



He could choose _____ and _____ because _____

_____.

Fraction Problem Solving

Directions: Solve the problem set below.



1) Danny has 4 bags of candy. Each bag weighs 2 pounds. How many pounds of candy does Danny have in all? **Danny has _____ pounds of candy in all.**

2) Danny has 4 bags of candy. Each bag weighs $\frac{1}{2}$ pound. How many pounds of candy does Danny have in all? **Danny has _____ pounds of candy in all.**

--	--	--	--

3) Danny has 4 bags of candy. Each bag weighs $\frac{1}{4}$ pound. How many pounds of candy does Danny have in all? **Danny has _____ pounds of candy in all.**

--	--	--	--

4) **Challenge:** Danny has 4 bags of candy. Each bag weighs $\frac{2}{5}$ pound. How many pounds of candy does Danny have in all? **Danny has _____ pounds of candy in all.**

--	--	--	--

5) What did you notice about these problems? Did you use any of the problems to help you solve another problem? **I noticed that** _____

Directions: Solve the problem below.

6) **Challenge:** Adam walks $\frac{5}{6}$ miles each day. He walks 5 days a week. How many miles does he walk in total each week? **Adam walks _____ miles in total.**

--	--	--	--	--

Check and Reflect: Use page 36 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 3: Same and Different

Directions: Look at the pictures. What is the same about them? What is different about them? Explain how you know.

These are the same because _____

These are different because _____



Day 3: Ice Cream Task

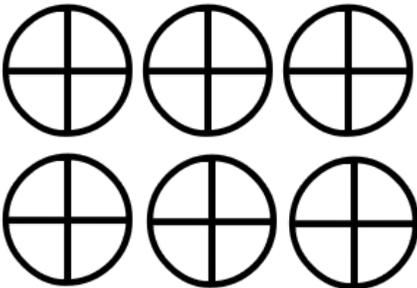
Kevin and Camila are scooping ice cream.

- Kevin scoops 6 scoops with $\frac{1}{4}$ cup of ice cream in each scoop.
- Camila scoops 3 scoops with $\frac{2}{3}$ cup of ice cream in each scoop.

Create a model for each person's ice cream, determine how much they each scooped, and who scooped more ice cream.



Kevin's ice cream scoops:



Kevin scooped _____ cups of ice-cream.

Camila's ice cream scoops:



Camila scooped _____ cups of ice cream.

_____ scooped more ice cream.

Check and Reflect: Use page 36 to check your answers. What did you get correct? Can you work it a different way? What was incorrect? Can you find your mistake? What can you do differently?



Day 4: Fraction Tic-Tac-Toe

Players: 1-2 players

Materials:

- crayon or colored pencil for each player 

Directions:

- Decide which player will be X and which player will be O.
- Player 1 selects a fraction and marks it with an X or O.
- Player 2 selects a different fraction and marks it with an X or O.
- Players take turns covering fractions, trying to cover 3 fractions in a row that **equal 1**.
- The winner is the first person to cover 3 fractions in a row that **equal 1**: horizontally, vertically, or diagonally.

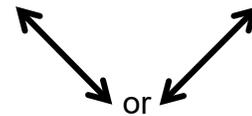
HORIZONTAL



VERTICAL



DIAGONAL

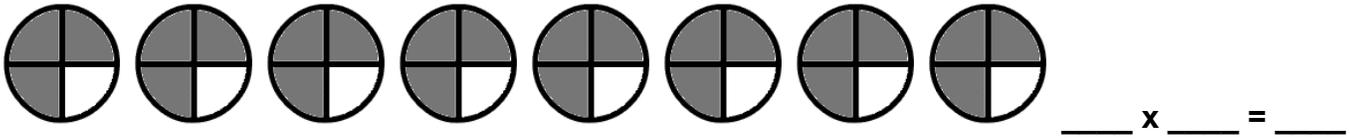


$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{2}{8}$
$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{8}$
$\frac{5}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{5}{8}$
$\frac{2}{8}$	$\frac{1}{8}$	$\frac{5}{8}$	$\frac{1}{4}$

From *Nimble with Numbers, Grades 4-5*, pgs.110-111

Day 5: Weekly Reflection

1) Write the equation modeled below.

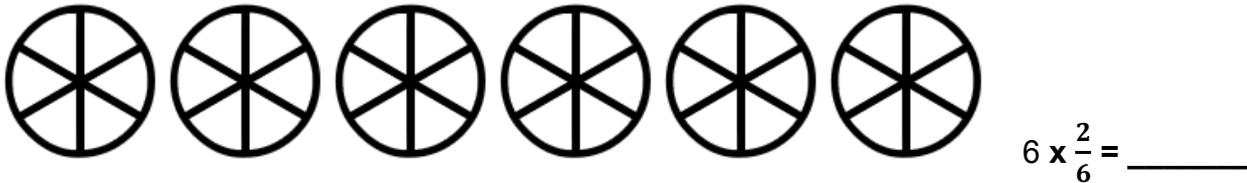


2) Dylan wants to run a total of 3 miles this week. If he runs $\frac{2}{3}$ mile each day for 6 days, will he meet his goal? Explain how you know.



He will (meet/not meet) his goal. I know because _____

3) Color the model to represent $6 \times \frac{2}{6}$. Complete the equation.



4) On another sheet of paper, create a story to match the following equation. Draw a model and find the **product**, the total amount in a multiplication problem.

$4 \times \frac{3}{4} = \underline{\hspace{2cm}}$

Answer Key

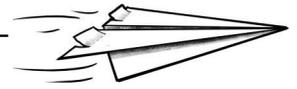
Day 1	Convince Me That: Answers may vary	1. $3 \times \frac{2}{3} = 2$ 2. $4 \times \frac{1}{2} = 2$ 3. $6 \times \frac{4}{6} = 4$ 4. 3
Day 2	Fraction Estimation: Answers may vary. Example: $1\frac{8}{10}$ and $3\frac{1}{6}$	1. 8 pounds 2. 2 3. 1 4. $1\frac{3}{5}$ 5. Answers may vary. Example: I know 4 groups of $\frac{1}{2}$ is 2. If $\frac{1}{4}$ is half of $\frac{1}{2}$ then the bag of candy will weigh half as much which is 1. 6. $4\frac{1}{6}$
Day 3	Same and Different: Answers may vary	Ice Cream Task: Kevin scooped $1\frac{1}{2}$ cups; Camila scooped 2 cups. Camila scooped more ice cream.
Day 5	Reflection:	1. $8 \times \frac{3}{4} = 6$ 2. Yes, he will exceed his goal. He will run 4 miles. 3. $6 \times \frac{2}{6} = 2$ 4. Stories will vary $4 \times \frac{3}{4} = 3$



SUMMER LEARNING QUEST: Paper Airplane Challenge



Have you ever made a paper airplane? A piece of paper can be turned into lots of different things. You can make them fly all depending on how you design and fold the material.

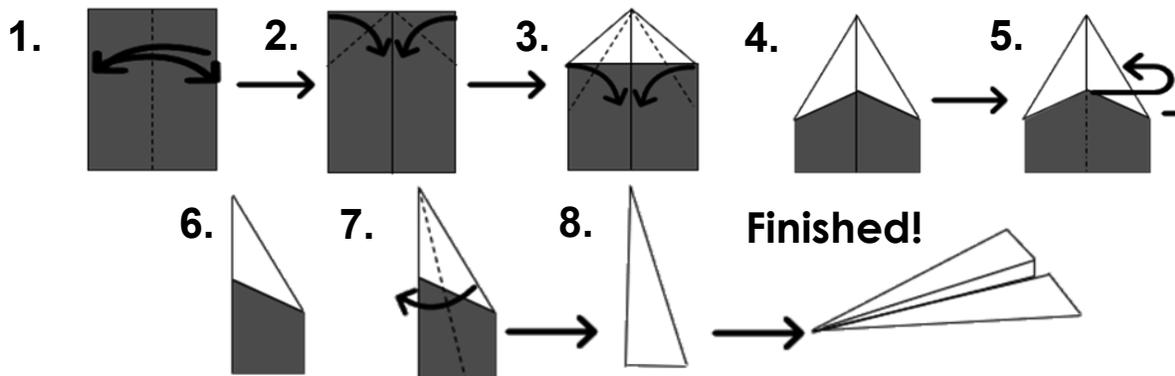


How can you design a paper airplane that can fly as far as possible?

Task Guidelines:

- Use one piece of paper per design.
- Try at least two designs.
- Consider using the steps below for your first design, then experiment on your second design idea.

DESIGN #1: Remember our directions from the Language Arts packet? Follow the same steps to make a paper airplane. Take your time and make nice folds like you are in art class!



DESIGN #2: Plan for your own design: Make a detailed drawing of your unique airplane design. Consider the steps and folds you want to take to create the best airplane. Use the space below. Then create your unique airplane.

Go to the next page to test and revise your airplane design!

Test: Find a place to test your airplane. For example, a sidewalk with adult permission.

- Measure the distance in steps or count sidewalk boxes.
- Adjust how hard or soft you throw the plane
- Try your test several more times. Did you get the same results? Which design worked best?

How far did it go?

Test 1	Test 2	Test 3
On the first try, it went:	On the second try, it went:	On the third try, it went:

Improve: Use this chart to think about your ideas

What worked well?

What didn't work?

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My ideas to improve my design

- What ideas do you have to make your plan fly farther?
- Did your plane fly straight down the sidewalk? What changes can you make for it to fly more straight?

Share your work with someone:

- Ask about any designs they may know of.
- What makes them think of that idea?
- What tips do they have that could help?

Think about your work:

- What did you like best?
- What could you make better?
- What is unique about your design?

Questions and ideas to take this project further:

- Test your revised plane. How far did it fly? Estimate and then measure the distance.
- Did your plane fly straight? How do you know?
- Try new variations of paper airplane designs. Look here for ideas <https://howthingsfly.si.edu/activities/paper-airplane>
- Learn about flight <https://howthingsfly.si.edu> or see examples of flight in nature <https://bit.ly/CCSSKZY>.



SUMMER LEARNING QUEST: CARTOONING WITH SIMPLE SHAPES

Critical and creative thinkers can create unique ideas.

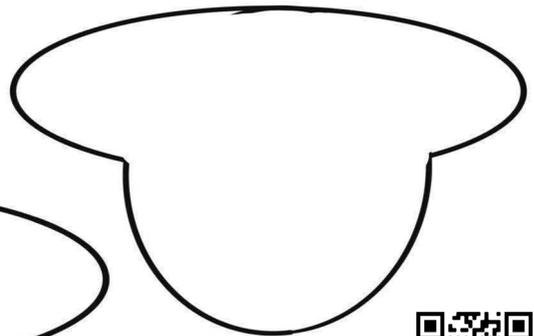
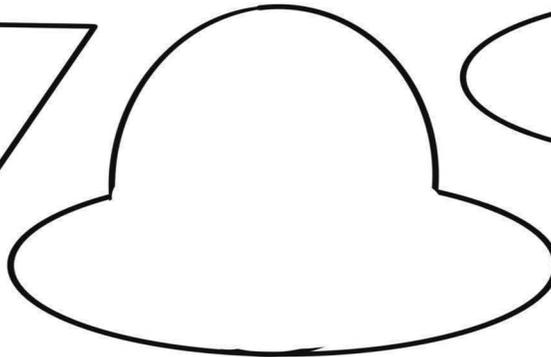
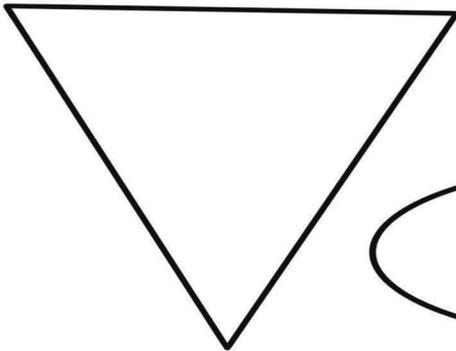
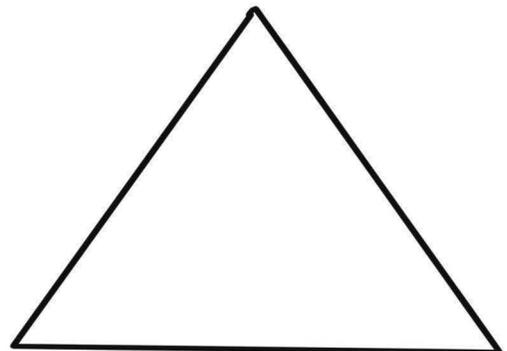
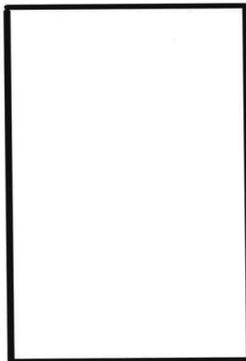
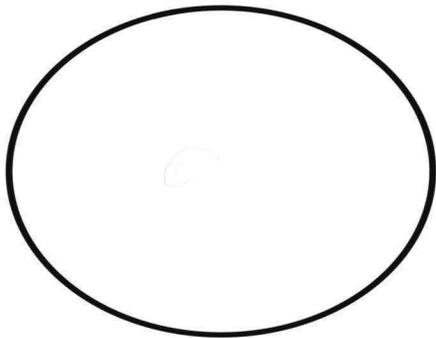


Take a look around! What shapes do you see?
Most things are made up of simple shapes— from tables,
to televisions, to plants, and even our phones.
Today we're going to use the simple shapes to build
creativity and have fun!



How can you, as a cartoonist, create unique characters from simple shapes?

Your task: Use the shapes below to create characters. Be creative and use a light touch as you draw so you can revise!

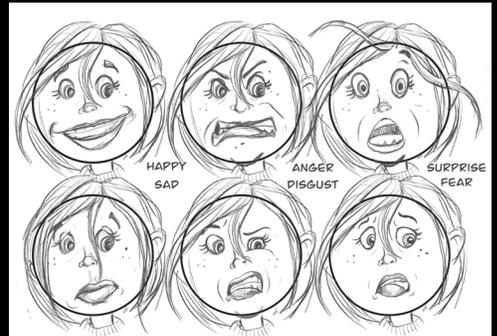


To go even deeper into cartooning with shapes, visit: <https://bit.ly/shapcartooning>

Reflect: Which of your designs is best? Why? What could you do to make it even better?

Ideas to take it further:

- Give your favorite design a name
- Now that you know your design is made from a basic shape, consider making the same character again. This time, add emotion by changing the eyebrows, eyes and mouth! →
(Try happy, angry, surprise, sadness, disgust and scared)
- Remember— you can do this anytime! Just draw shapes and start creating!





SUMMER LEARNING QUEST: WHAT SHOULD YOU KNOW ABOUT COVID-19?

Wear a mask or face covering when in crowded places.



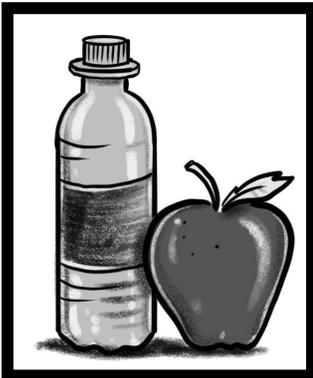
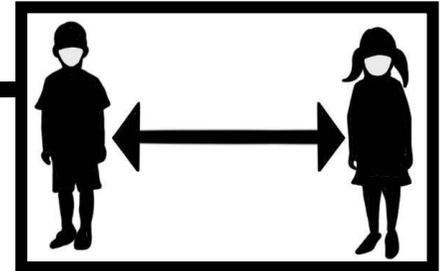
Wash your hands with warm soap and water for 20 seconds.

Avoid touching your face.



What can I do to prevent spreading COVID-19?

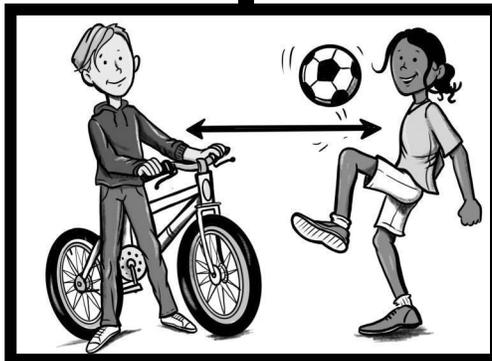
Practice social distancing by staying at least six feet away from people who do not live with you.



It's OK to play outside if you stay at least 6 feet away (about 3 BIG steps) from other people that you do not live with.



Keep yourself healthy by exercising, eating fruits and vegetables, and getting enough sleep.



Stay home if you are sick, ask others to do the same. If someone who lives with you is sick, try to stay away from them.

Look at the back cover of the Language Arts practice book to learn more about COVID-19!