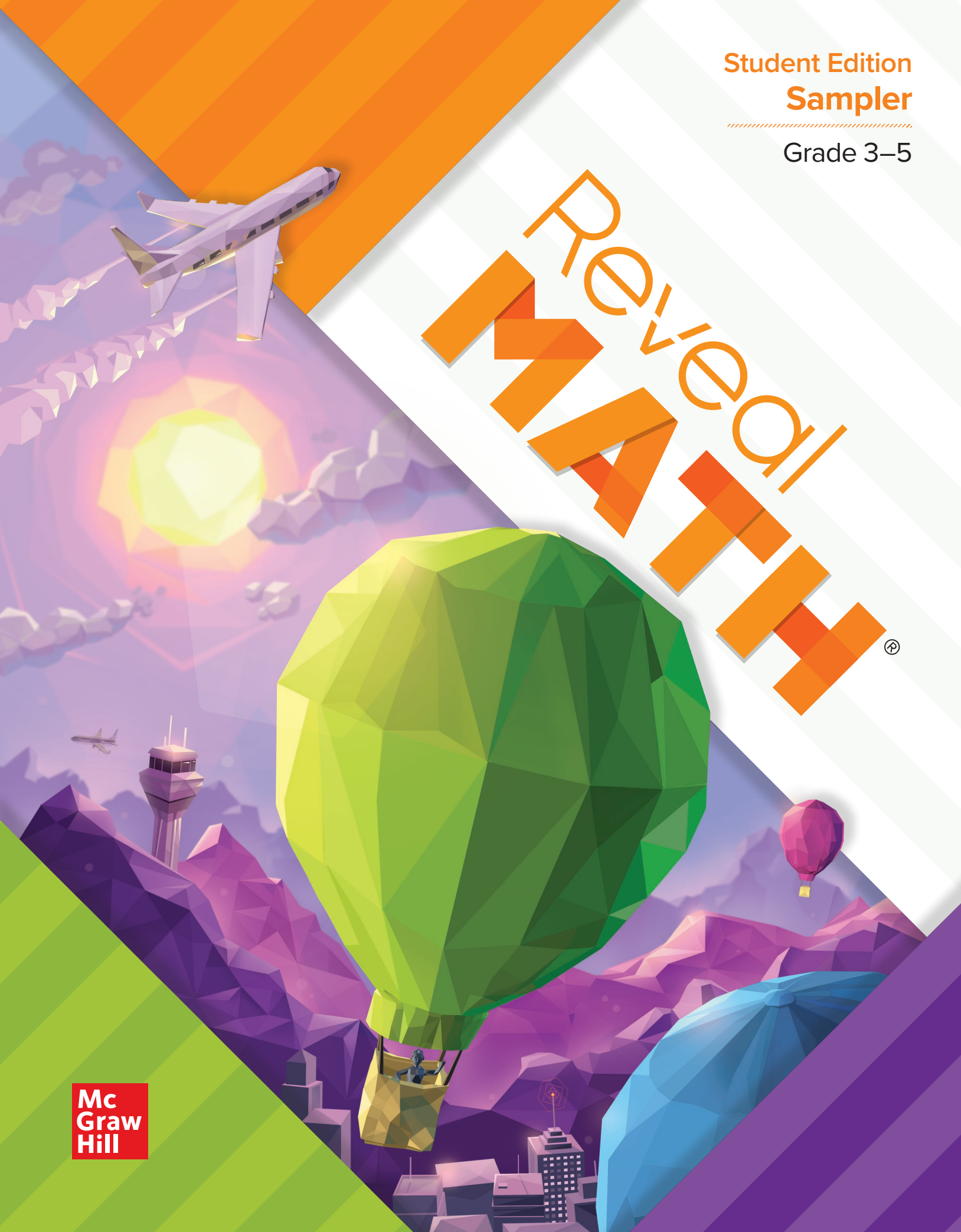
Student Edition

Sampler

Grade 3–5

Reveal MATH®



Mc Graw Hill

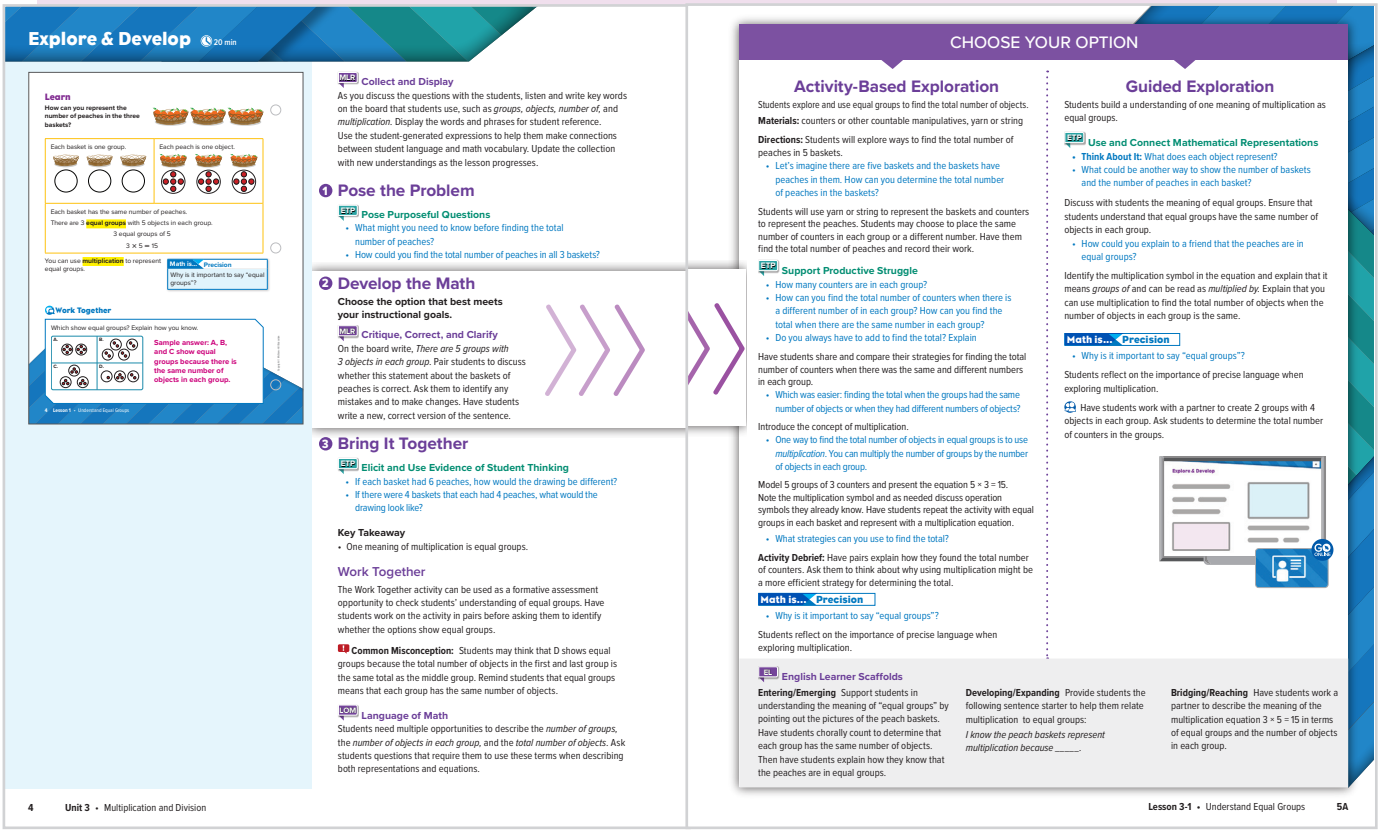
Student Edition Sampler
Grades 3–5

Reveal MATH™

Reveal the Full Potential in Every Student

A Note to the Reviewer:

The Learn page of the Student Edition is a reference to the Explore and Develop part of the daily lesson for the student as they work independently. Within Explore and Develop, teachers can choose between two instructional strategies, an Activity-Based Exploration or Guided Exploration, to develop the math for the day's lesson. This is best reviewed in the Teacher's Edition.



Explore & Develop 20 min

Learn

How can you represent the number of peaches in the three baskets?

Each basket is one group. Each peach is one object.

Each basket has the same number of peaches.
There are 3 equal groups with 5 objects in each group.
3 equal groups of 5
3 × 5 = 15

You can use multiplication to represent equal groups.

Math is... Precision
Why is it important to say "equal groups"?

Work Together

Which show equal groups? Explain how you know.

Sample answer: A, B, and C show equal groups because there is the same number of objects in each group.

4 Lesson 1 • Understand Equal Groups

MLR Collect and Display

As you discuss the questions with the students, listen and write key words on the board that students use, such as *groups, objects, number of,* and *multiplication.* Display the words and phrases for student reference. Use the student-generated expressions to help them make connections between student language and math vocabulary. Update the collection with new understandings as the lesson progresses.

❶ Pose the Problem

EP2 Pose Purposeful Questions

- What might you need to know before finding the total number of peaches?
- How could you find the total number of peaches in all 3 baskets?

❷ Develop the Math

Choose the option that best meets your instructional goals.

MLR2 Critique, Correct, and Clarify

On the board write, *There are 5 groups with 3 objects in each group.* Pair students to discuss whether this statement about the baskets of peaches is correct. Ask them to identify any mistakes and to make changes. Have students write a new, correct version of the sentence.

❸ Bring It Together

EP2 Elicit and Use Evidence of Student Thinking

- If each basket had 6 peaches, how would the drawing be different?
- If there were 4 baskets that each had 4 peaches, what would the drawing look like?

Key Takeaway

- One meaning of multiplication is equal groups.

Work Together

The Work Together activity can be used as a formative assessment opportunity to check students' understanding of equal groups. Have students work on the activity in pairs before asking them to identify whether the options show equal groups.

Common Misconception: Students may think that D shows equal groups because the total number of objects in the first and last group is the same total as the middle group. Remind students that equal groups means that each group has the same number of objects.

LOM Language of Math

Students need multiple opportunities to describe the *number of groups,* the *number of objects in each group,* and the *total number of objects.* Ask students questions that require them to use these terms when describing both representations and equations.

4 Unit 3 • Multiplication and Division

CHOOSE YOUR OPTION

Activity-Based Exploration

Students explore and use equal groups to find the total number of objects.

Materials: counters or other countable manipulatives, yarn or string

Directions: Students will explore ways to find the total number of peaches in 5 baskets.

- Let's imagine there are five baskets and the baskets have peaches in them. How can you determine the total number of peaches in the baskets?

Students will use yarn or string to represent the baskets and counters to represent the peaches. Students may choose to place the same number of counters in each group or a different number. Have them find the total number of peaches and record their work.

EP2 Support Productive Struggle

- How many counters are in each group?
- How can you find the total number of counters when there is a different number of in each group? How can you find the total when there are the same number in each group?
- Do you always have to add to find the total? Explain

Have students share and compare their strategies for finding the total number of counters when there was the same and different numbers in each group.

- Which was easier: finding the total when the groups had the same number of objects or when they had different numbers of objects?

Introduce the concept of multiplication.

- One way to find the total number of objects in equal groups is to use *multiplication.* You can multiply the number of groups by the number of objects in each group.

Model 5 groups of 3 counters and present the equation 5 × 3 = 15. Note the multiplication symbol and as needed discuss operation symbols they already know. Have students repeat the activity with equal groups in each basket and represent with a multiplication equation.

- What strategies can you use to find the total?

Activity Debrief: Have pairs explain how they found the total number of counters. Ask them to think about why using multiplication might be a more efficient strategy for determining the total.

Math is... Precision

- Why is it important to say "equal groups"?

Students reflect on the importance of precise language when exploring multiplication.

Guided Exploration

Students build a understanding of one meaning of multiplication as equal groups.

EP2 Use and Connect Mathematical Representations

- **Think About It:** What does each object represent?
- What could be another way to show the number of baskets and the number of peaches in each basket?

Discuss with students the meaning of equal groups. Ensure that students understand that equal groups have the same number of objects in each group.

- How could you explain to a friend that the peaches are in equal groups?

Identify the multiplication symbol in the equation and explain that it means *groups of* and can be read as *multiplied by.* Explain that you can use multiplication to find the total number of objects when the number of objects in each group is the same.

Math is... Precision

- Why is it important to say "equal groups"?

Students reflect on the importance of precise language when exploring multiplication.

Have students work with a partner to create 2 groups with 4 objects in each group. Ask students to determine the total number of counters in the groups.

EL English Learner Scaffolds

Entering/Emerging Support students in understanding the meaning of "equal groups" by pointing out the pictures of the peach baskets. Have students chorally count to determine that each group has the same number of objects. Then have students explain how they know that the peaches are in equal groups.

Developing/Expanding Provide students the following sentence starter to help them relate multiplication to equal groups:
I know the peach baskets represent multiplication because _____.

Bridging/Reaching Have students work a partner to describe the meaning of the multiplication equation 3 × 5 = 15 in terms of equal groups and the number of objects in each group.

Lesson 3-1 • Understand Equal Groups 5A

Table of Contents

The units within this Student Edition Sampler represent a progression of place value content across the grade levels third through fifth grade.

Math is...

How would you complete this sentence?

Math is.....

Math is not just adding ansd subtracting. (carrying out operations)

Math is...

- working together
- finding patterns
- sharing ideas
- listening thoughtfully to our classmates
- sticking with a task even when it is a little challenging

In *Reveal Math*, you will develop the habits of mind that strong doers of math have. You will see that math is all around us.

Let's be Doers of Mathematics

Remember, math is more than reaching the right answer. It is a tool for understanding the world around you. It is a language to communicate and collaborate. Be mindful of these prompts throughout your Student Edition to help you harness the power of math!

1. **Math is... Mine**
   - Mindset

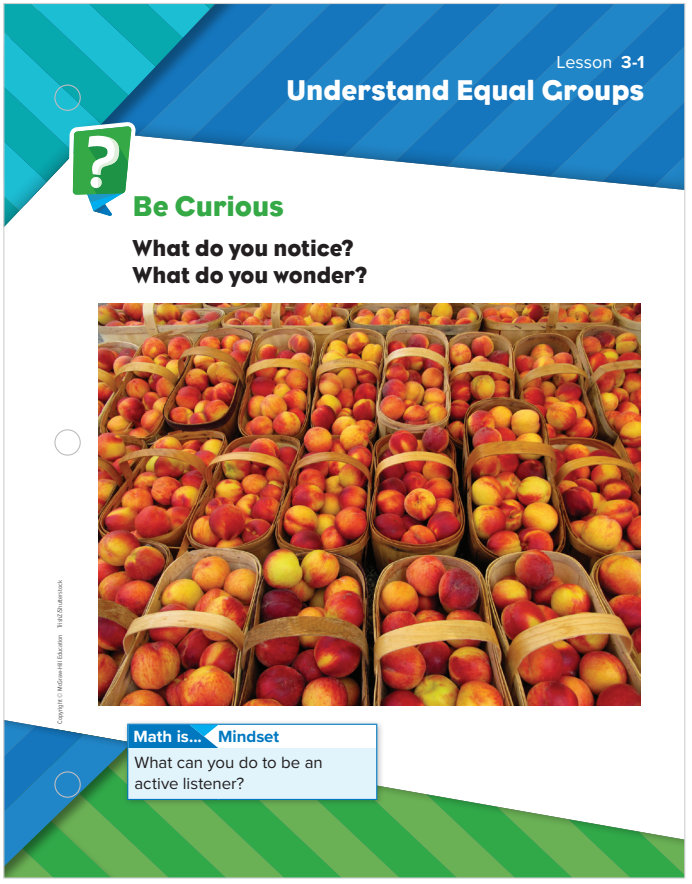
2. **Math is... Exploring and Thinking**
   - Exploring
   - Planning
   - Connections
   - Thinking

3. **Math is... My World**
   - In My World
   - Modeling
   - Choosing Tools

4. **Math is... Explaining and Sharing**
   - Explaining
   - Sharing
   - Precision

5. **Math is... Finding Patterns**
   - Patterns
   - Generalizations

6. **Math is... Ours**
   - Mindset



Math is... Mindset

What can you do to be an active listener?

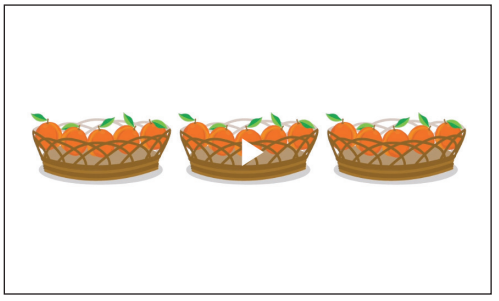
Access Lesson Supports Online!

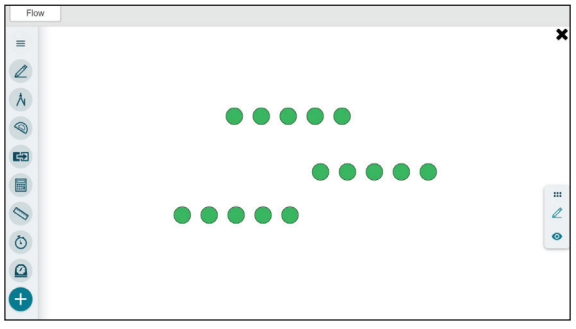
In addition to your Interactive Student Edition, access these supports online while you practice.

MATH REPLAY | GO ONLINE

Need an Instant Replay of the Lesson Content?

Math Replay videos offer 1–2 minute overview of the lesson concept to use as a reference while you are practicing or completing your homework.





Virtual Tools to Help You Problem-Solve

You can access the eToolkit at any time from your Student Dashboard. You will have access to the following manipulatives:

- Counters
- Base-Ten Blocks
- Array Builder
- Fraction Model
- Bucket Balance
- Geometry Sketch
- Money
- Fact Triangles
- Number Line
- and more!

Use Place Value to Fluently Add and Subtract within 1,000

Focus Question

How can I use strategies to add and subtract efficiently?

STEM video | GO ONLINE

IGNITE!

Name _____

Penny Estimation

Listen to your teacher. Estimate the number of pennies that will fit in each rectangle.

A

B

C

Represent 4-Digit Numbers

Be Curious

What do you notice?
What do you wonder?

Math is... Mindset

How does identifying your feelings and emotions help you?

Learn

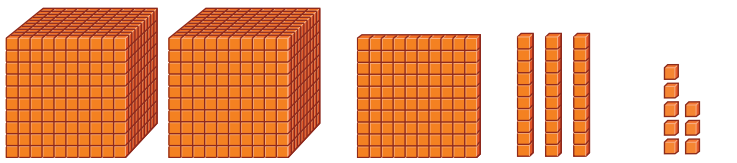
What are some ways to represent this number?

4-digit numbers have thousands, hundreds, tens, and ones.

You can use place-value charts.

thousands	hundreds	tens	ones
2	1	3	8

You can use base-ten blocks.



2 cubes	1 flat	3 rods	8 units
2,000	100	30	8

You can read and write the number in different forms.

standard form	2,138
expanded form	2,000 + 100 + 30 + 8
word form	two thousand, one hundred thirty-eight

You can use an understanding of place value to represent a 4-digit number.

Math is... Generalizations

How is representing 4-digit numbers the same as representing 3-digit numbers?

Work Together

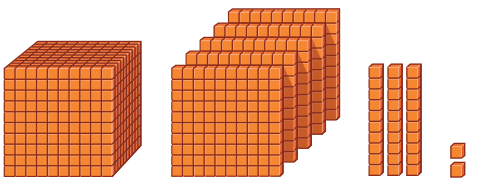
How can you represent 1,208 in expanded form and word form?

On My Own

Name _____

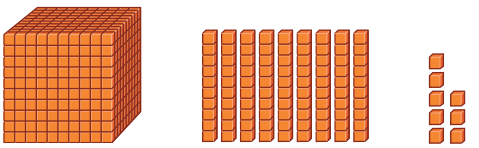
What number is represented by the base-ten blocks?

1.



thousands	hundreds	tens	ones

2.



thousands	hundreds	tens	ones

How can you represent the number in the place-value chart and in expanded form?

3. 2,446

thousands	hundreds	tens	ones

_____ _____

4. 4,729

thousands	hundreds	tens	ones

_____ _____

How can you represent the number shown in standard form and expanded form?

5. three thousand, one hundred twelve

_____ _____

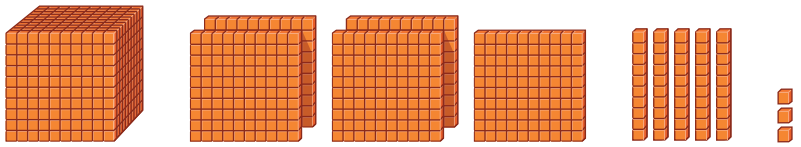
6. six thousand, eighty-seven

_____ _____

7. seven thousand, two hundred twenty-four

_____ _____

How can you represent the number shown in standard form and expanded form?

8. 

_____ _____

How can you represent the number in standard form?

9. 8,000 + 500 + 2

_____

10. 9,000 + 50 + 2

_____

11. STEM Connection 1,455 customers visited Saffron's pastry shop this month. Last month 1,355 customers came to the shop. Explain how she can use place value to determine the difference in the number of customers.

12. Extend Your Thinking Use the digits shown to write a number with the least possible value. Write the number in standard form, expanded form, and word form.

3 8 8 2

_____ _____

_____

Reflect

How does place value help you write a number in word form?

Math is... Mindset

What feelings did you experience today and how did you know?

Round Multi-Digit Numbers

Be Curious

What do you notice?
What do you wonder?

Math is... Mindset

What can you do to work together with your classmates?

Learn

About how many blocks are there?

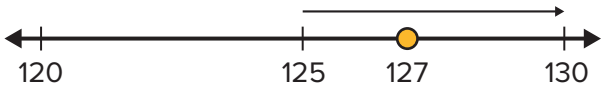
You can round to describe about how many.

When you **round** to the nearest 10 or 100, you determine a ten or a hundred that is close to the original number.

One Way Use a number line to round.

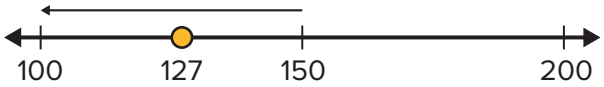
Round to the nearest 10.

127 is to the right of the halfway point. It rounds to 130.



Round to the nearest 100.

127 is to the left of the halfway point. It rounds to 100.



Another Way Use place value to round.

Round to the nearest 10.

$12\underline{7}$

If the digit in the ones place is 5 or greater, round up.

130

Round to the nearest 100.

$1\underline{2}7$

If the digit in the tens place is less than 5, round down.

100

You can round to make a number easier to work with when an exact number is not needed.

Math is... Generalizations

When is rounding a useful strategy?

Work Together

Ellie rounds 255 to 260. Carter rounds 255 to 300. Why are their numbers different?

On My Own

Name _____

How can you use a number line to round?

1. Round 27 to the nearest 10.

_____

2. Round 896 to the nearest 10.

_____

How can you use place value to round?

3. Round 48 to the nearest 10.

_____

4. Round 273 to the nearest 10.

_____

How can you use a number line to round? Show your work.

5. Round 436 to the nearest 100.

436 rounded to the nearest 100 is _____.

6. Round 672 to the nearest 100.

672 rounded to the nearest 100 is _____.

7. Why can the number 78 round to 80 and 100? Explain.

8. A number rounded to the nearest 10 is 240. What number could it be? _____

9. How can you use the number line to show why 678 rounded to the nearest 100 is 700? Explain your reasoning.

10. Error Analysis Tess says that 315 rounded to the nearest 10 is 310. Do you agree? Explain your reasoning.

11. Jack is making a fruit salad. He puts in 9 strawberries, 25 orange wedges, 19 kiwi slices, 27 blueberries, 16 grapes, and 21 raspberries. Which fruits does he use about 20 of?

12. Extend Your Thinking Sam is shopping. He has $50. He wants to buy dog food that costs $15, vegetables that cost $22, and fruits that cost $12. How can Sam use rounding to make sure he has enough money?

Reflect

When might you want to round to the nearest 10 instead of the nearest 100?

Math is... Mindset

How did you work together with your classmates?

Unit 2

Rounding Numbers

Name _____

Circle *all* correct answers for the problem.

1. Suppose you rounded to the nearest 10. Which numbers below would round to 630? Circle *all* of them.

a. 632

b. 638

c. 627

d. 625

e. 623

f. 635

g. 534

h. 529

Explain your choices.

Circle *all* correct answers for the problem.

2. Suppose you rounded to the nearest 100. Which numbers below would round to 900? Circle *all* of them.

a. 956

b. 871

c. 943

d. 839

e. 962

f. 819

g. 988

h. 925

Explain your choices.

Reflect On Your Learning

I am confused. | I'm still learning. | I understand. | I can teach someone else.

Estimate Sums and Differences

Be Curious

What could you ask?

Math is... Mindset

How can you recognize and understand how others are feeling?

Learn

Carter is 122 centimeters tall. The giraffe is 576 centimeters tall.

About how much taller is the giraffe?

Compatible numbers are numbers that are easy to work with.

One Way Round to the nearest 10 or 100.

$576 - 122 = ?$

$\downarrow \quad \downarrow$

$580 - 120 = 460$

$576 - 122 = ?$

$\downarrow \quad \downarrow$

$600 - 100 = 500$

Another Way Use other compatible numbers.

$576 - 122 = ?$

$\downarrow \quad \downarrow$

$575 - 125 = 450$

Math is... Choosing Tools

How can estimating a sum or difference help to detect possible errors?

You can use compatible numbers to **estimate** an answer when you do not need an exact sum or difference.

Work Together

An elephant eats 428 pounds of food on Thursday and 503 pounds of food on Friday. About how many pounds of food does the elephant eat in the two days?

On My Own

Name _____

How can you estimate the sum or difference?
Write or draw to show your thinking.

1. 423 + 168 = ?

2. ? = 695 − 205

3. ? = 317 + 248

4. 473 + 218 = ?

5. 798 − 307 = ?

6. ? = 835 − 466

7. How can you use rounding to find the sum of 389 + 223?

8. A complete set of baseball cards has 678 cards. Julio needs 273 more cards to complete his set. How can you use rounding to find about how many cards are in Julio's collection?

9. The Comic Book Shack displays 318 comic books near the front door and keeps 502 comic books in the storage room. How can you use compatible numbers to find about how many comic books are in the store?

10. **STEM Connection** Saffron's bakery needs to decorate 355 cupcakes for an event. It has decorated 223 so far. How can she determine about how many more cupcakes they need to decorate? Explain your reasoning.

11. Melinda estimates she traveled 830 miles last Monday and Tuesday. She traveled 412 miles on Tuesday. About how many miles could she have traveled on Monday?

12. **Extend Your Thinking** Jason has 744 flyers to deliver. If he has delivered 62 flyers at each of his last 2 stops, about how many flyers does he have left to deliver?

Reflect

When might you need to estimate a sum or difference in your life?

Math is... Mindset

How have you worked to understand how others are feeling?

Use Addition Properties to Add

Be Curious

At the school carnival, Billy won some tickets at balloon darts, more tickets at ring toss, and the most tickets at basketball toss.

Math is... Mindset

How can you explain your thinking?

Learn

At the school carnival, Billy won 27 tickets at balloon darts, 40 tickets at ring toss, and 53 tickets at basketball toss.

How can you find the total number of tickets he won?

One Way You can group addends in any way and the sum will be the same.

$27 + 53 + 40$

$80 + 40 = 120$

$27 + 53 + 40$

$27 + 93 = 120$

Another Way You can switch the order of the addends and the sum will be the same.

$27 + 53 + 40 = 120$

$40 + 27 + 53 = 120$

Billy has 120 tickets.

The properties of addition can help you be more efficient when you add.

Grouping addends or changing the order of the addends can make the problem easier to solve.

Math is... Structure

How can grouping the addends help you add more efficiently?

Work Together

Josh is completing the equation $797 + 111 =$ _____ $+ 797$. Josh adds $797 + 111$ and subtracts 797 to complete the equation. How can Josh complete the equation another way?

On My Own

Name _____

How can you make the equation true?

1. 218 + 325 = 325 + _____

2. 465 + _____ = 78 + 465

3. 529 + 407 = _____ + 529

4. _____ + 93 = 93 + 505

5. Mauricio had a sale. The table shows the number of items he sold each day. Which expressions show how to find the total number of items Mauricio sold? Choose all that apply.

A. 42 + 67 + 58

B. 67 − 58 + 42

C. 58 + 42 + 67

D. 58 + 67 + 24

Items Sold	
Monday	58
Tuesday	67
Wednesday	42

6. How can you group the addends? Explain why you chose to group them in that way.

372 + 264 + 228

How can you show one way to group these addends and solve?

7. 157 + 17 + 783

8. 198 + 502 + 155

9. 135 + 458 + 42

10. 235 + 105 + 317

11. STEM Connection Saffron needs to order the items listed. How can she group these numbers to find her total cost?

flour	$367
boxes	$358
cupcake liners	$142

12. Extend Your Thinking Mrs. Ruiz is checking her receipt. The three items cost $305, $350, and $195. How can she use both properties of addition to add more efficiently?

Reflect

How can changing the order of three addends help you add more efficiently?

Math is... Mindset

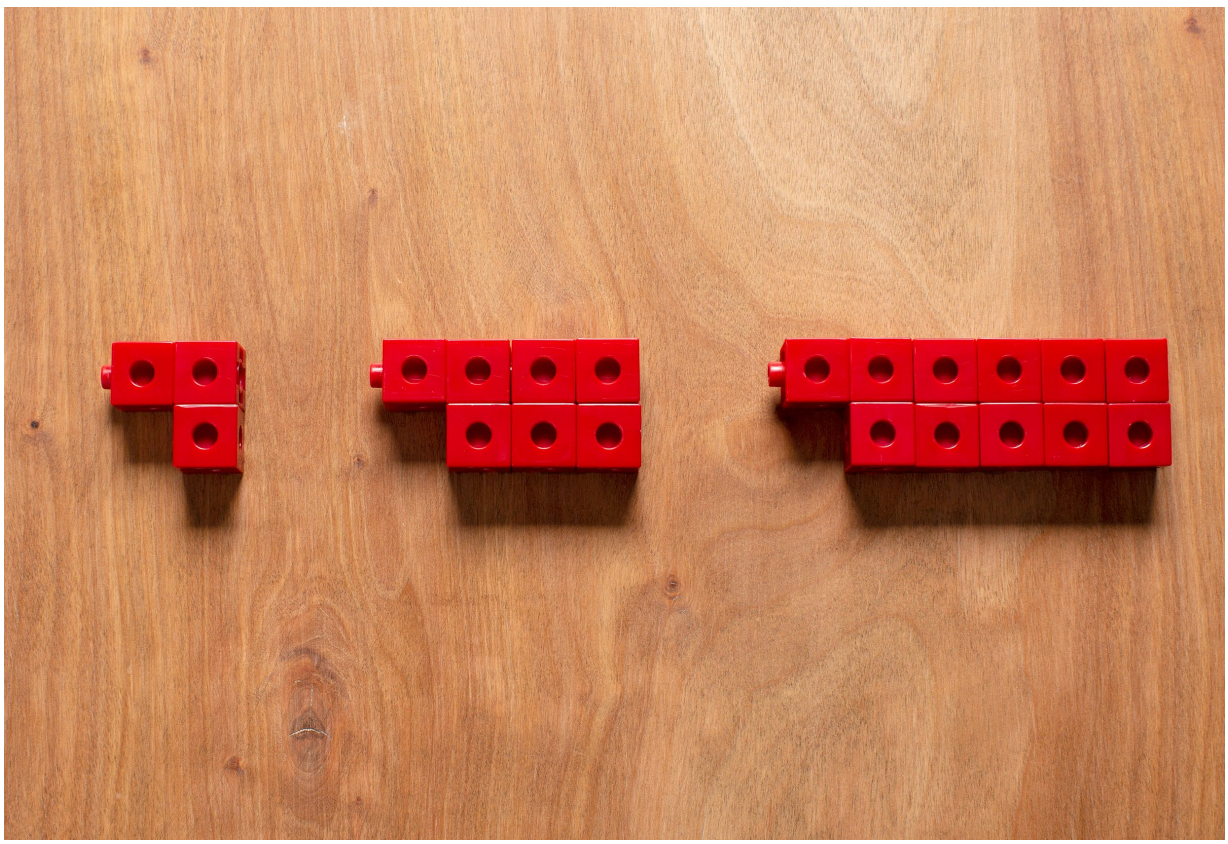
How has explaining your thinking helped you learn?

Addition Patterns

Be Curious

Is it always true?

Mena states that the total will always be odd if she continues to add 4 blocks to the set.



Math is... Mindset

What rules or routines do you follow in math?

Learn

Mena notices that when she adds an even number and an odd number, the sum is odd.

How can she determine if the sum of an even number and an odd number is always odd?

When you add **even numbers** and **odd numbers**, there are patterns in the sums.

When you add two even numbers, the sum is even.

$246 + 100 = 346$

$432 + 224 = 656$

$318 + 480 = 798$

When you add two odd numbers, the sum is even.

$547 + 155 = 702$

$325 + 631 = 956$

$421 + 273 = 694$

When you add an even number and an odd number, the sum is odd.

$272 + 723 = 995$

$546 + 231 = 777$

$647 + 244 = 891$

Math is... Generalizations

Why is it true that the sum of two odd numbers is always even?

You can use addition patterns to help you determine a sum, or to check your work, when you add 3-digit numbers.

Work Together

Nisha writes $135 + 232 = 167$. She says her sum is correct because an odd number added to an even number equals an odd sum. Do you agree with her reasoning? Explain.

On My Own

Name _____

What makes the equation true? Write *even* or *odd*. Then write 2 equations with 3-digit numbers to support your answer.

1. _____ = even + even

2. odd + even = _____

3. odd + _____ = even

4. even + odd = _____

5. even + _____ = even

6. _____ = odd + odd

What is the sum? Use patterns to help justify your answer.

7. 486 + 123 = _____

8. 154 + 272 = _____

9. Why is the sum of a number with a 3 in the ones place and a number with a 4 on in the ones place always an odd sum? .

10. How can you explain why the digits in the ones place of the addends determine if the sum will be even or odd?

11. **STEM Connection** A baking sheet can hold an even or odd number of pastries. If Saffron wants an even number of pastries, how can she arrange the pasteries on 2 sheets?

12. **Extend Your Thinking** Carol designs scarves. If she uses 112 blue, 113 yellow, and 114 brown stripes on a scarf, will the scarf have an even or odd number of stripes? Explain how you know.

Reflect

How can addition patterns help you justify that a sum is correct?

Math is... Mindset

What rules or routines did you follow in math?

Use Partial Sums to Add

Be Curious

How are they the same?
How are they different?

Math is... Mindset

What are your strengths in math?

Learn

Maggie and Tanesha break apart the addends by place value to add 367 + 145. They show their work in different ways.

How can each girl show their work in a different way?

You can **decompose**, or break apart, the addends by place value to find partial sums. Then, add the partial sums to find the sum.

One Way You can write the addends in a row.

$$367 + 145 = ?$$
$$300 + 100 = 400$$
$$60 + 40 = 100$$
$$7 + 5 = 12$$
$$400 + 100 + 12 = 512$$

Another Way You can stack the addends.

	367
	+ 145
300 + 100	400
60 + 40	100
7 + 5	+ 12
	512

partial sums

One addition strategy is to find partial sums and add them to find the sum. You can write the addends in this strategy in different ways.

Math is... Explaining

Why is the sum the same when the addends are in a row or stacked?

Work Together

Ari's work is shown. Jun sees Ari's work and says 500 is the sum of 225 + 309. Do you agree? Explain your reasoning.

	309
	+ 225
300 + 200	500
0 + 20	100
9 + 5	+ 14
	614

On My Own

Name _____

How can you decompose each addend? What is the sum?

1. 247 + 564 = _____

2.
$$\begin{array}{r} 815 \\ +\ 148 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 729 \\ +\ 148 \\ \hline \end{array}$$

4. 327 + 176 = _____

5. Whitney uses partial sums to add. Look at her work to determine which two numbers were in her original equation.

_____ + _____ = 598

200 + 300 = 500

10 + 80 = 90

6 + 2 = 8

500 + 90 + 8 = 598

6. How can you determine which addends are in the original equation by looking at the partial products?

7. Tyrone spent 172 days in school last year. If he attends school the same number of days next year, how many days will he spend in school in two years?

How can you find the sums in a different way?

8.
$$475 + 325 = 800$$
$$400 + 300 = 700$$
$$70 + 20 = 90$$
$$5 + 5 = 10$$
$$700 + 90 + 10 = 800$$

9.
$$\begin{array}{r} 238 \\ +\ 271 \\ \hline 400 \\ 100 \\ +\ \ 9 \\ \hline 509 \end{array}$$

10. Eleanor's watch shows her steps before lunch. She took 486 steps after lunch. How many steps did she take?

11. Error Analysis Amal adds 378 + 141. She decomposes each number and adds 300 + 100 = 400. She writes 378 + 141 = 400. How can you explain her mistake?

12. Extend Your Thinking How can you solve 249 + 401 + 276 using partial sums? Show your work.

Reflect

Why is understanding place value important when using the partial sums strategy to add?

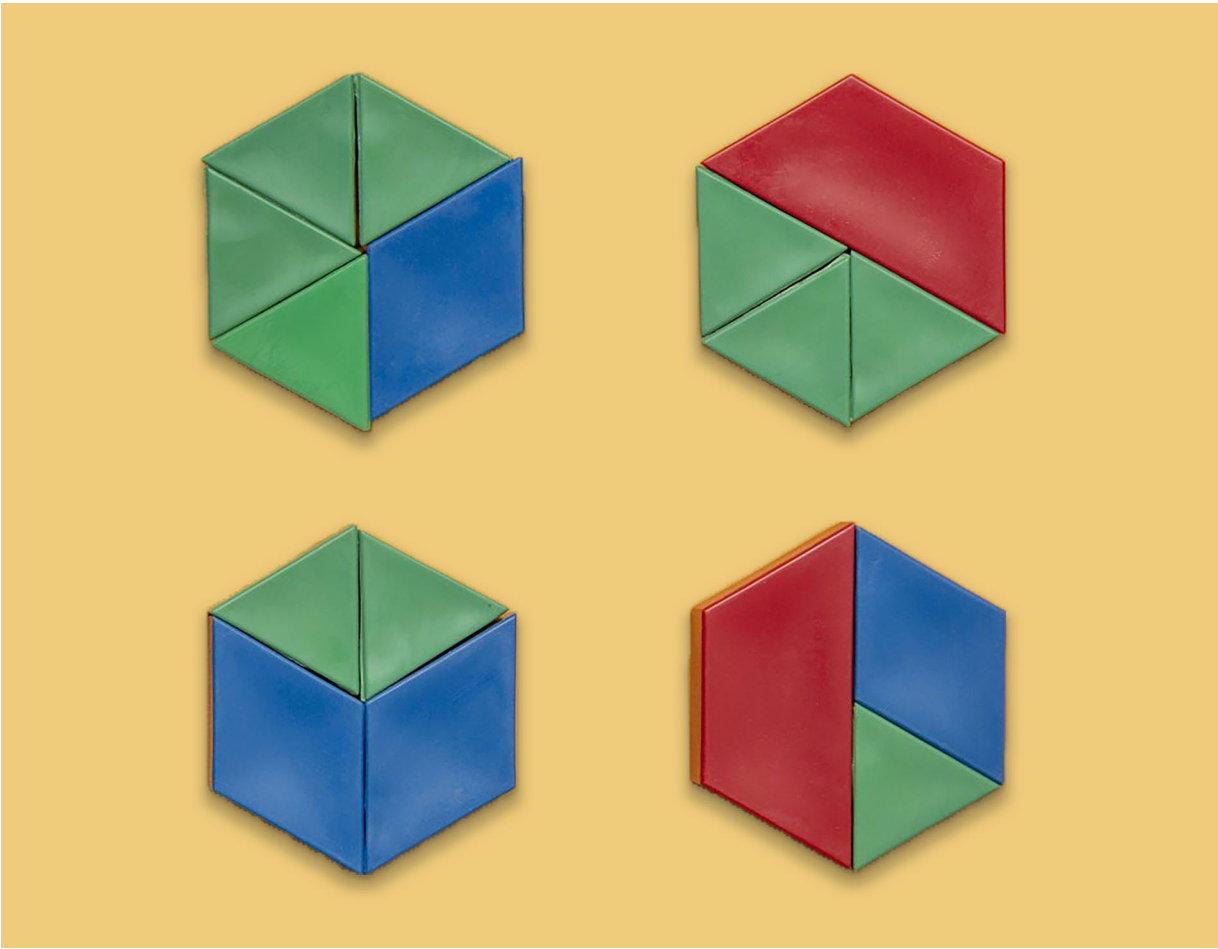
Math is... Mindset

What strengths did you use today? What can you work on?

Decompose to Subtract

Be Curious

How are they same?
How are they different?



Math is... Mindset

How can flexible thinking help you understand mathematical rules or patterns?

Learn

Samir and Jen subtract 353 − 184. Samir decomposes one number to subtract. Jen decomposes the same number in a different way to subtract.

Will Jen find the same difference as Samir?

One Way You can decompose one number by place value.

$353 - 184 = ?$

$353 - 100 = 253$

$253 - 80 = 173$

$173 - 4 = 169$

$353 - 184 = 169$

Another Way You can decompose one number in a different way.

$353 - 184 = ?$

$353 - 153 = 200$

$200 - 30 = 170$

$170 - 1 = 169$

$353 - 184 = 169$

One subtraction strategy is to decompose one number and then subtract the parts from the total. You can decompose numbers in different ways to subtract.

Math is... Explaining

Why is the difference the same when the number is decomposed differently?

Work Together

Hannah subtracts 572 − 378. How can Hannah decompose one number in two different ways to subtract?

On My Own

Name _____

How can you decompose each number in 2 ways?

1. 367

2. 876

How can you decompose one number to subtract? Why did you choose that way?

3. 495 – 122

4. 639 – 370

How can you find the difference? Show the strategy you used.

5. 284 – 182 = _____

6. _____ = 333 – 114

7. 502 – 382 = _____

8. 744 – 466 = _____

9. **Error Analysis** Juan subtracts 345 − 101. He decomposes 101 into 100 and 10 and subtracts the parts from 345. How can you help him understand his mistake?

10. The table shows the number of people who attended the school fun fair each day. Show a strategy to find the difference between the greatest and least number of people.

Fun Fair Visitors	
Day	**Number of People**
Thursday	103
Friday	168
Saturday	257
Sunday	224

11. A baker bakes 268 bread rolls. 155 are cinnamon rolls. The rest are plain rolls. How many plain rolls does she bake?

12. **Extend Your Thinking** Ana subtracts 438 − 342 by decomposing 342. She subtracts 2, then 300, and finally 40. Can she subtract the parts in any order? Explain your reasoning.

Reflect

How do you decide how to decompose one number to subtract?

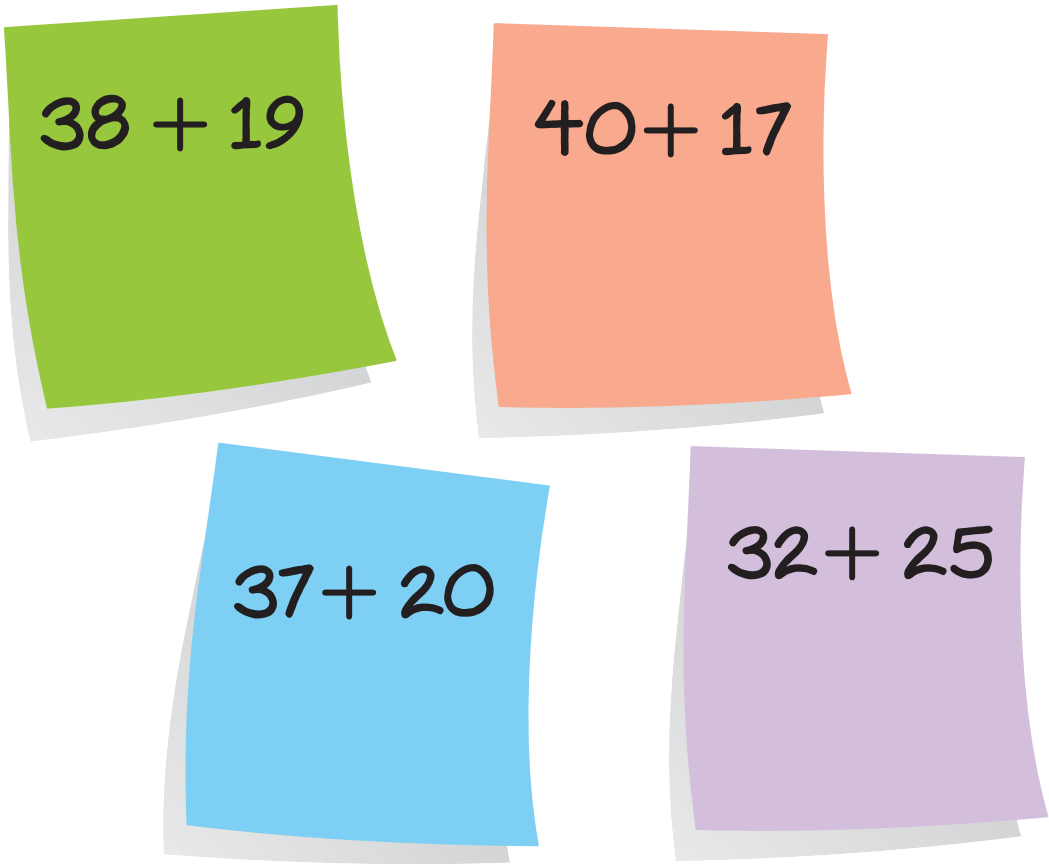
Math is... Mindset

How did flexible thinking help you understand mathematical rules or patterns?

Adjust Numbers to Add or Subtract

Be Curious

Which doesn't belong?



Math is... Mindset

How can you show others that you value their ideas?

Learn

There are 224 Tigers fans and 212 Hawks fans at the town football game. 109 more Tigers fans arrive late to the game.

How many more Tigers fans than Hawks fans are at the game?

Adjust Addition Equations

$$224 + 109 = ?$$

-1 $+1$

$$223 + 110 = 333$$

Subtract from one addend and add that amount to the other.

Adjust Subtraction Equations

$$333 - 212 = ?$$

-2 -2

$$331 - 210 = 121$$

Subtract or add the same amount to both numbers.

You can adjust numbers to numbers that are easier to work with. Adjust both numbers to keep the sum or difference the same as the original.

Math is... Structure

How is adjusting a subtraction equation different from adjusting an addition equation?

Work Together

Marco adds 457 + 208. He adjusts 457 to 460 and 208 to 211. He finds the sum 671. Do you agree with his strategy? Explain.

On My Own

Name _____

How can you adjust the equation to solve?

1. 272 − 99 = _____

2. 139 + 216 = _____

3. 847 − 332 = _____

4. 398 + 147 = _____

5. 491 − 226 = _____

6. 129 + 139 = _____

7. Alex adjusted the equation 109 + 119 = ? to 110 + 118 = ?. Describe how he adjusted the equation. Why do you think he did it in that way?

8. Show how you can adjust 396 − 226. Use a number line to show that the new equation has the same difference.

9. You can adjust 236 − 119 different ways. How can you explain one way you can adjust and why the equation is easier?

10. Melissa and Juan are finding 129 + 257 by adjusting. Melissa tries solving using 130 + 258 = 388 and Juan solves it using 130 + 256 = 386. Which sum is correct? Explain.

11. **STEM Connection** Saffron completed 851 orders of pastries her first year. After her second year, she completed 926 orders. How can you use adjusting to show how many more pastry orders she completed in her second year than her first year?

12. **Extend Your Thinking** Yazmin adds 457 + 251. She adjusts 251 to 250, but forgets to adjust 457. She adds 250 + 457 = 707. How can she adjust the sum to fix her mistake? Explain your reasoning.

Reflect

How can adjusting just one number affect the addition or subtraction equation?

Math is... Mindset

How have you shown others that you value their ideas?

Use Addition to Subtract

Be Curious

What do you notice?
What do you wonder?

Math is... Mindset

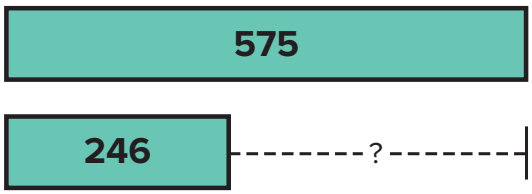
How can you show that you understand your partner's ideas?

Learn

Adaline and her family are driving 575 miles to visit her grandmother. They drive 246 miles and stop for lunch.

How can you find how many miles they have left to drive?

You can represent the problem with a **bar diagram**.



You can write a subtraction equation with an unknown difference.

$575 - 246 = ?$

$575 - 246 = \mathbf{329}$

You can write an addition equation with an unknown addend.

$246 + ? = 575$

$246 + \mathbf{329} = 575$

Addition and subtraction are related. You can rewrite a subtraction equation as an addition equation with an unknown addend.

Math is... Choosing Tools

How can using an unknown addend equation be helpful when you subtract?

Work Together

Deigo wants to use addition to solve the equation $478 - 326 = ?$. How can you explain this strategy?

On My Own

Name _____

How can you write a related addition equation for the subtraction equation?

1. 635 − 202 = ? _____

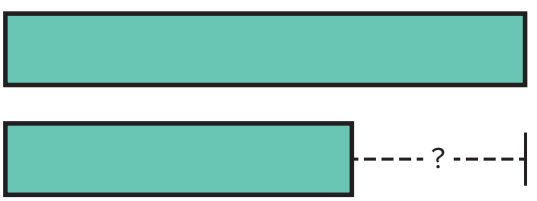
2. 400 − 151 = ? _____

3. 825 − 134 = ? _____

4. **Error Analysis** Jayla knows she can use addition to subtract. She adds 301 + 447 to find the difference of 447 − 301. How can you help her understand how to use this strategy?

5. On Monday, 549 people visited the aquarium. On Friday, 823 people visited the aquarium. How many more people visited the aquarium on Friday?

   a. How can you fill in the bar diagram to represent the problem?



   b. How can you write an equation with an unknown to represent the bar diagram?

How can you use the relationship between addition and subtraction to find the difference?

6. 480 − 318 = _____

7. _____ = 300 − 179

8. 705 − 239 = _____

9. 212 − 135 = _____

10. Evan and Kyle put together a 500-piece puzzle. Evan placed 247 pieces. How many pieces did Kyle place?

11. **STEM Connection** Saffron's Bake Shop can spend $700 to buy a large and a small mixer. She spends $411 on the large mixer. How much does she have left to spend on a small mixer?

12. **Extend Your Thinking** Kwan says that he can solve 445 − ? = 239 by using the equation 445 + 239. Do you agree? Explain why.

Reflect

How are addition and subtraction related?

Math is... Mindset

How did you show that you understand your classmates' ideas?

Lesson **2-10**

Fluently Add within 1,000

Be Curious

Last year the library's collection of books increased.
This year additional books were added to the library.

Math is... Mindset

How can my math skills help me with my work today?

Learn

Last year the library's collection of books grew from 350 to 722 books. This year 169 books were added to the library.

What strategies can you use to find the total number of books in the library?

Math is... Exploring

How can you decide which information in the problem is useful?

Partial Sums You can decompose each addend by place value and add the place values to find partial sums. Then add the partial sums to find the total.

$722 + 169 = ?$

$700 + 100 = 800$
$20 + 60 = 80$
$2 + 9 = 11$
$800 + 80 + 11 = \mathbf{891}$

$700 + 100$
$20 + 60$
$2 + 11$

$$\begin{array}{r} 722 \\ +\ 169 \\ \hline 800 \\ 80 \\ +\ \ 11 \\ \hline \mathbf{891} \end{array}$$

Adjust Addends You can adjust the addends to numbers that are easier to work with. Subtract from one addend and add that amount to the other addend.

$722 + 169 = ?$
$-1 \quad +1$
$721 + 170 = 891$

You can use any addition strategy to find the sum. You can decide which addition strategy is most efficient for you.

Work Together

Angel and Daniel find the sum of 348 + 227. Angel adjusts the addends. Daniel uses partial sums. Can either strategy be used to sovle? Explain your reasoning.

On My Own

Name _____

How can you solve the equation?

1. 437 + 269 = _____

2. _____ = 123 + 443

3. _____ = 367 + 512

4. 791 + 111 = _____

5. **Error Analysis** Priya is adding 327 + 478. Priya adds 3 to 327 to add 330 + 478. Then she subtracts 3 from the sum. Do you agree with her strategy? Explain.

6. Sam adds 249 + 281 by writing his addends in a row. What is another way Sam can show 249 + 281?

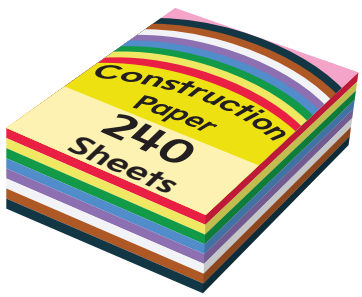
7. Max's little brother Henry is 2 years old. There are 365 days in a year. How many days old is Henry?

How can you solve the equation? Explain your addition strategy.

8. 458 + 139 = _____

9. 719 + 234 = _____

10. Mr. Perez needs 650 sheets of construction paper for his class art project. How many packs of this construction paper should he buy?



11. Tryon School raised $345 at their school fundraiser and $486 at their bake sale. They used $650 of the money they raised to buy new playground equipment. How much money did Tryon School raise?

12. **Extend Your Thinking** The community center had 113 swimmers in the fall class and 235 swimmers in the winter class. The summer class had 105 more swimmers than both classes combined. How many swimmers were in the summer class?

Reflect

How do you decide which addition strategy to use when solving a problem?

Math is... Mindset

How did your math skills help you with your work today?

Fluently Subtract within 1,000

Be Curious

Is it always true?

Niko says the only way to subtract 348 − 135 is to decompose 135.

Math is... Mindset

What goal do you want to accomplish today?

Learn

Mateo sold 543 tickets to the newest action movie Friday night. He sold 134 fewer tickets on Saturday night than Friday. Then Sunday afternoon he sold 248 tickets.

What strategies can you use to find the number of tickets he sold Saturday?

Math is... Exploring

How is this problem like other problems you have solved?

Decompose One Number

You can decompose one number in different ways and subtract the parts.

$543 - 100 = 443$
$443 - 30 = 413$
$413 - 3 = 410$
$410 - 1 = 409$

$543 - 134 = \mathbf{409}$

Adjust Numbers

You can adjust the numbers to numbers that are easier to work with. Subtract from or add the same amount to both numbers.

$543 - 134 = ?$

$+6 \quad +6$

$549 - 140 = 409$

Related Addition Equation

You can write an addition equation with an unknown addend to find the difference.

$543 - 134 = ?$ $\qquad$ $134 + ? = 543$

$543 - 134 = \mathbf{409}$ $\qquad$ $134 + \mathbf{409} = 543$

You can use any subtraction strategy to find the difference. You can decide which subtraction strategy is most efficient for you.

Work Together

What strategy might be useful to solve $542 - 118$? Explain your reasoning.

On My Own

Name _____

How can you solve each equation?

1. 779 − 363 = _____

2. 562 − 295 = _____

3. 934 − 874 = _____

4. 134 − 68 = _____

5. At the airport baggage claim, there are 497 passengers and 632 pieces of luggage. How many more pieces of luggage are there than passengers?

6. Mark and Heidi are asked to solve 171 − 136. Their work is shown. Which strategy would you choose to solve the problem?

Mark

170 − 135 = ?

Heidi

136 + ? = 171

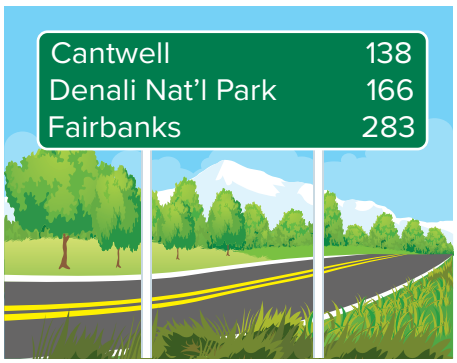
7. Cadence earned 299 points in her online game. This was 102 points greater than her last score. Marco earned 414 points. How many more points did Marco earn?

How can you solve the equation? Explain your subtraction strategy.

8. 400 − 349 = _____

9. 668 − 218 = _____

10. On her family road trip, Zahara sees a road sign showing how many miles they are from different cities. How much further is Fairbanks than Cantwell?



11. Error Analysis Celia says that to subtract 249 − 117 she can decompose 249 and subtract the parts from 117. Do you agree? Explain your reasoning.

12. Extend Your Thinking While playing his favorite board game, Armando wins $550 in game money. He decides to use $335 to buy game spaces, $122 on a game piece, and the rest he saves. Does Armando save more than $100? Show how you know.

Reflect

How do you determine if a subtraction strategy is efficient?

Math is... Mindset

How have you worked to accomplish your goal today?

Lesson **2-12**

Solve Two-Step Problems Involving Addition and Subtraction

Be Curious

Lea earns points playing her favorite dance video game. She plays the next level and earns more points. Lea needs points to buy a new song for the game.

Math is... Mindset

How can you think about a problem in a different way?

Learn

Lea earns 235 points playing her favorite dance video game. She plays the next level and earns 112 more points. Lea needs 475 points to buy a new song for the game.

How many more points does Lea need to buy a new song?

You can represent each part of the problem with a bar diagram.

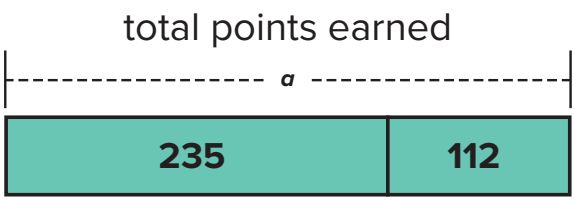
Math is... Modeling

How can you represent this problem in different ways?

Step 1 Determine how many points Lea has earned.

You can use an addition equation.

$235 + 112 = a$



$235 + 112 = \mathbf{347}$

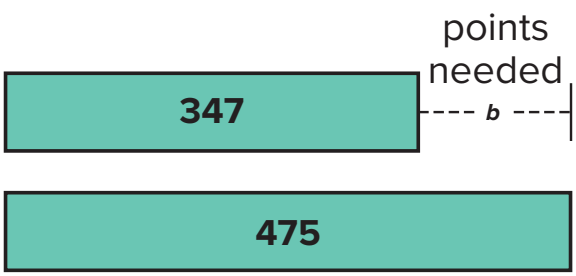
Lea has 347 points.

Step 2 Determine how many more points Lea needs.

You can use a subtraction equation.

$475 - 347 = b$

You can use a letter to represent the unknown.



$475 - 347 = \mathbf{128}$

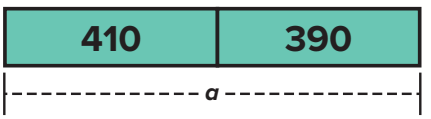
Lea needs 128 more points.

On My Own

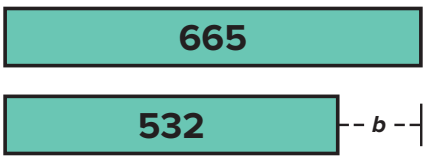
Name _____

How can you write an equation to represent the bar diagram?

1.



2.



_____ _____

How can you draw a bar diagram to represent the equation?

3. $601 - b = 299$

4. $100 + a = 750$

Represent and solve the problem. Use letters for the unknowns.

5. Sam and Ben take turns driving. They traveled 417 miles in May and 454 miles in June. If Sam drove 502 of the miles, how many miles did Ben drive?

6. Jaya earned $187 babysitting. She bought a wireless speaker for $129 and a carrying case for $26. How much money does she have left?

7. Judy has 323 beads. Sarah has 142 more beads than Judy. How many beads do they have together?

How can you solve for the unknown?

8. $m = 456 - 236$

$m =$ _____

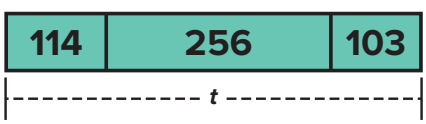
9. $867 = 235 + k$

_____ $= k$

10. STEM Connection Saffron keeps track of the pastries she has at her bakery each day. On Monday, she bakes 324 pastries and sells 172 pastries. At the end of the day she has 584 pastries in her bakery. How many pastries did she start the day with?

11. Elroy's Balloon Emporium sells boxes of balloons. There are 100 balloons in a box. In January, they sell 3 boxes. In February, they sell 6 boxes. If they started with 10 boxes, how many balloons do they have left to sell?

12. Extend Your Thinking The bar diagram represents a two-step word problem. Write a two-step word problem that could represent the bar diagram.



Reflect

How can you make sense of a two-step problem?

Math is... Mindset

How have you thought about a problem in a different way?

Unit Review

Name _____

Vocabulary Review

Choose the correct word to complete each sentence.

compatible number	decompose
estimate	expanded form
round	

1. When you _____ addends, you break them apart to help find the sum. (Lesson 2-6)

2. You can _____ an answer by rounding or using compatible numbers when you do not need an exact answer. (Lesson 2-3)

3. When you _____ a number, you replace the value of the number with one that is close to the original number. (Lesson 2-2)

4. A _____ is a number that is easy to work with. (Lesson 2-3)

5. The representation of a number as a sum of the values of each digit is called _____. (Lesson 2-1)

Review

6. Which of the following is the standard form of the number three thousand, eight hundred forty? (Lesson 2-1)

A. 384

B. 3,408

C. 3,804

D. 3,840

7. Circle the option that correctly shows rounding to the nearest 10. (Lesson 2-2)

784 → 785 492 → 500
563 → 560 535 → 530

Complete the following using properties of addition. (Lesson 2-4)

8. 289 + 621 = 621 + _____

9. 78 + _____ + 212
= 418 + 212 + 78

10. Sasha spent 284 minutes swimming the first week and 247 minutes the second week. Which of the following is the best estimate for the total time Sasha spent swimming? (Lesson 2-3)

A. 500 minutes because rounding each number to the nearest 100 will give you the best estimate.

B. 520 minutes because rounding each number to the nearest 10 will give you the best estimate.

C. 530 minutes because rounding each number to the nearest 10 will give you the best estimate.

D. 600 minutes because rounding each number to the nearest 100 will give you the best estimate.

Identify whether the sum will be even or odd. (Lesson 2-5)

11. The sum of two 3-digit numbers that are both odd will always be _____.

12. The sum of a 3-digit number that is odd and another 3-digit number that is even with always be _____.

13. Decompose the addends to help find the sum. (Lesson 2-6)
506 + 472 = _____

14. Decompose one number to help find the difference. (Lesson 2-7)

$367 - 228 =$ _____

15. Gabe is trying to solve $246 + 367$. Which equation shows how he could adjust the addends to find the sum? (Lesson 2–8)

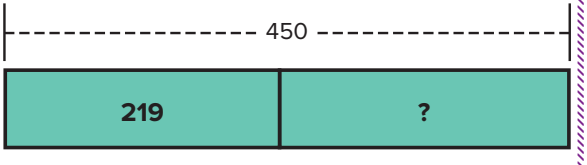
A. $250 + 360 = ?$

B. $250 + 370 = ?$

C. $250 + 363 = ?$

D. $250 + 371 = ?$

16. Use the bar diagram to help you find the missing number. (Lesson 2-9)



$219 +$ _____ $= 450$

$450 -$ _____ $= 219$

17. Do you think it makes more sense to decompose both addends or adjust both addends to solve $388 + 472$? Explain. (Lesson 2-10)

18. Which of the following equations can you use to solve this subtraction equation? (Lesson 2-11)

$836 - 377 = ?$

A. $377 + 459 = 836$

B. $459 - 377 = 836$

C. $459 - 836 = 377$

D. $836 + 459 = 377$

19. Enrique read 249 pages of his book in June and 227 pages of his book in July. The book has a total of 638 pages and Enrique wants to know how many more pages he has left to read. (Lesson 2-12)

Which set of equations could be used to solve the word problem?

A. $227 + 249 = 476$
$638 - 227 = 411$

B. $249 + 277 = 476$
$638 - 476 = 162$

C. $638 - 249 = 389$
$389 + 227 = 616$

D. $638 - 227 = 411$
$411 + 249 = 660$

Performance Task

Saffron is helping in a new pastry shop that has been open for two weeks.

Pastry Shop Customers	
Week	**Number of Customers**
1	324
2	289
3	?

Part A How many total customers did the pastry shop have in Weeks 1 and 2?

Part B What is the difference between the number of customers in Weeks 1 and 2?

Part C The pastry shop's goal is to have 800 customers within the first 3 weeks. How many customers must visit in Week 3 for the shop to reach the goal?

Part D If the pastry shop has 847 visitors in the first 3 weeks, which week would have more customers: Week 1 or Week 3? How many more?

Reflect

How can you use strategies to add and subtract multi-digit numbers?

Unit 2

Fluency Practice

Name _____

Fluency Strategy

You can make a 10 to add or subtract.

Make a 10 to add 49 + 22.

49 is 1 away from a ten.
Subtract 1 from 22 and add 1 to 49.

$$49 + 22 = ?$$
$$+1 \quad -1$$
$$50 + 21 = 71$$

Use a 10 to subtract 75 − 43.

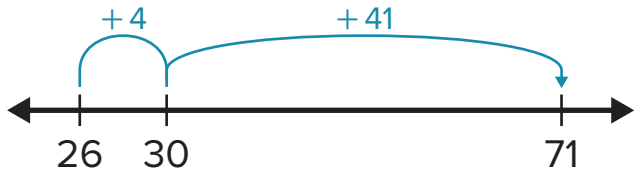
43 is 3 away from a ten.
Subtract 3 from 75 and subtract 3 from 40.

$$75 - 43 = ?$$
$$-3 \quad -3$$
$$72 - 40 = 32$$

Fluency Flash

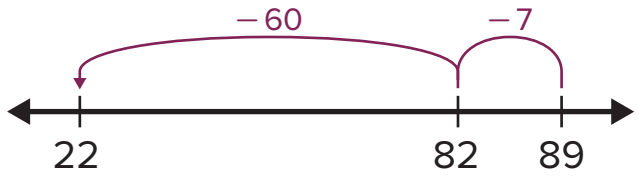
Look at the number line. Write a matching equation.

1.



_____

2.



_____

Fluency Check

Add or subtract.

3. $49 + 16 =$ _____

4. $75 + 0 =$ _____

5. $76 - 42 =$ _____

6. $58 + 37 =$ _____

7. $87 - 2 =$ _____

8. $29 - 1 =$ _____

9. $61 + 0 =$ _____

10. $58 + 2 =$ _____

11. $89 - 23 =$ _____

12. $19 + 2 =$ _____

13. $52 - 1 =$ _____

14. $54 - 31 =$ _____

15. $17 + 25 =$ _____

16. $49 + 48 =$ _____

Fluency Talk

Explain to a friend how to make 10 to add $28 + 17$.

How is adjusting to make a 10 different when subtracting than when adding?

Generalize Place-Value Structure

Focus Question

How can I use place value to work with multi-digit numbers?

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IGNITE!

Name _____

Fewest Coins

Table 1

Use the fewest pennies, nickels, and quarters to make each amount.

Cents	Quarters	Nickles	Pennies
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

Table 2

Use the fewest pennies, dimes, and dollars to make each amount.

Cents	Dollars	Dimes	Pennies
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
97			
98			
99			
100			
101			

Understand the Structure of Multi-Digit Numbers

Be Curious

Which doesn't belong?

1,389

180

2,382

11,808

Math is... Mindset

How can you explain your thinking?

Learn

Akira says that the digits in the number shown are all the same, so they all have the same value.

8,888

Do you agree with Akira's thinking? Explain your reasoning.

Math is... Explaining

What do you need to construct a good argument?

Write the number in expanded form. Then look at the value of each part of the expanded form.

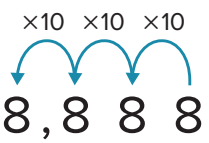
$8{,}888 = 8{,}\mathbf{000} + 8\mathbf{00} + 8\mathbf{0} + 8$

$80 = 8 \times 10$

$800 = 80 \times 10$

$8{,}000 = 800 \times 10$

The value of each 8 is different. Each 8 is ten times the value of the 8 to the right.



Akira's thinking is not correct.

The value of a digit is determined by its place-value position.

A digit in one place represents ten times what it represents in the place to its right.

Work Together

How can you describe the relationship between the values of the digits 3 in this number? Explain.

3,830

On My Own

Name _____

What is the value of the digits in the number?

1. 1,489

1: _____

4: _____

8: _____

9: _____

2. 98,124

1: _____

2: _____

4: _____

8: _____

9: _____

How can you describe the relationship between the values of the underlined digits?

3. 2̲58 and 2̲,180

4. 16̲,852 and 14,6̲74

5. 1̲2,184 and 541̲,247

6. 453̲ and 1,33̲3

What is the greatest number and the least number you can create using the given digits? Use each digit only once. Do not use 0 as the first digit.

7. 3, 5, 8, and 9

8. 7, 1, 0, 6, 4

9. Is the value of the digit in the hundreds place ten times the value of the digit in the tens place in the number 3,735? Explain.

10. Karma created a number using the digits 4, 2, and 7. Use the following clues to determine Karma's number.

The number is between 7,000 and 8,000.
The digit 4 has a value of 40.
The value of the digit in the thousands place is 10 times the value of the digit to its right.

11. Extend Your Thinking Sienna wants to rearrange the digits in the number 1,258,072 so that the value of one of the digits is 10 times the value of another digit in her number. What number could she write? Justify your answer.

12. Error Analysis Rahul says the relationship between the 3s in the number 45,339 is different than the relationship between the 6s in the number 66,084. How would you respond to Rahul?

Reflect

How can place-value help you determine the value of a digit?

Math is... Mindset

How has explaining your thinking helped you learn?

Lesson **2-2**

Read and Write Numbers to One Million

Be Curious

What do you notice? What do you wonder?

Math is... Mindset

Why is active listening important?

Learn

How can you read the population of Philadelphia, PA?

Math is... Choosing Tools

What will the tool tell me about the number?

You can use a place-value chart to make sense of a multi-digit number.

This place-value chart shows nine positions. It has three groupings. Each grouping is a **period**.

Each period has the same three places.

Millions Period			Thousands Period			Ones Period		
hundreds	tens	ones	hundreds	tens	ones	hundreds	tens	ones
		1	5	7	6	5	9	6

Word Form

One million, five hundred seventy-six thousand, five hundred ninety-six

Standard Form 1,576,596

A comma separates the periods.

Expanded Form 1,000,000 + 500,000 + 70,000 + 6,000 + 500 + 90 + 6

You can use the values of the digits and the names of place-value positions to read and write multi-digit numbers. Commas are used toseparate the periods when writing numbers in standard form.

Work Together

How can you write *seven hundred thirty-six thousand, nine hundred two* in standard form and expanded form?

On My Own

Name _____

How can you write the number in standard form?

1. Four hundred thousand, nine hundred thirty _____

2. Thirty-four thousand, nine hundred eighty-nine _____

How can you write the number in expanded form?

3. 530,879

4. 6,216

How can you write the number in word form?

5. 205,782

6. 1,108,308

7. **STEM Connection** Poppy found a sticker on the sign showing the size of Olympic National Park. She knows the size is between one million and nine hundred thousand acres. She also knows that the value of the digit in the ten thousands place is 10 times greater than the value of the digit in the thousands place. What is the size of the park?

_____

What are other ways to write the number? Complete the table.

	Standard Form	Expanded Form	Word Form
8.	405,832		
9.		500,000 + 30,000 + 9,000 + 10 + 5	
10.			six hundred ten thousand, four hundred sixteen

11. **Extend Your Thinking** How is the word form of 245,007 similar to the word form of 700,245? Explain why these similarities exist.

12. What are the missing words or digits in each form of the number?

Word form: _____ thousand, _____ eight

Expanded form: _____ + 400 + _____

Standard form: 6 _____, _____ _____ _____

Reflect

How can place value help you make sense of multi-digit numbers?

Math is... Mindset

What have you done to be an active listener today?

Compare Multi-Digit Numbers

Be Curious

What question could you ask?

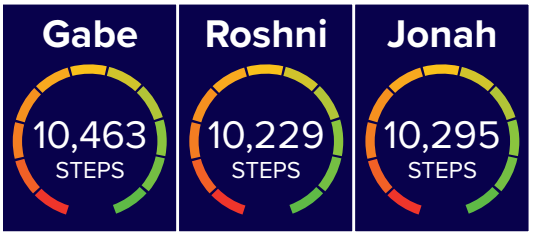
Math is... Mindset

What are some ways you can give positive feedback to your classmates?

Learn

Jonah says that he has walked more steps than Roshni.

How can Jonah support his statement?



Math is... Thinking

What are some mathematical representations you can use to compare numbers?

Jonah can use place value to compare the two numbers.

One Way Use a Place-Value Chart

The digits in the tens place are different.

Thousands Period			Ones Period		
hundreds	tens	ones	hundreds	tens	ones
	1	0	2	9	5
	1	0	2	2	9

9 tens are greater than 2 tens, so 10,295 > 10,229.

Another Way Use Expanded Form

$10{,}295 = 10{,}000 + 200 + \mathbf{90} + 5$
$10{,}229 = 10{,}000 + 200 + \mathbf{20} + 9$

90 is greater than 20, so 10,295 > 10,229.

To compare multi-digit numbers, compare the digits in each place. Start with the digits in the greatest place-value position.

Work Together

Who walked more steps in May? Justify your answer.

Name	Steps in May
Roshni	245,821
Jonah	43,068

On My Own

Name _____

How can you compare the numbers? Complete with >, <, or =.

1. 5,598 ◯ 55,889

2. 123,710 ◯ 123,711

3. 628,910 ◯ 628,800

4. 709,103 ◯ 709,130

5. 6,217 ◯ 6,241

6. 43,829 ◯ 43,598

Is the comparison true or false? Explain your reasoning.

7. 1,780 < 11,780

8. 720,301 < 720,031

9. 34,646 > 321,446

10. 24,747 < 24,774

11. Rebecca knows her number is greater than 15,724 by looking at the digits in the tens place. What could be Rebecca's number? Justify your answer.

12. Error Analysis Jamar says 9,280 is greater than 12,621 because the digit 9 is greater than the digit 1. How can you respond to Jamar's statement? Justify your thinking.

13. Maddie's mother is buying a new vehicle. The table shows the cost of vehicles she is considering. Which vehicle is the most expensive? Justify your answer.

Vehicle	Cost
Minivan	$ 24,990
Pickup Truck	$ 31,990
Sports Car	$ 22,990

14. Extend Your Thinking Write a number less than 4,850 by only switching two digits in this number. Explain your thinking.

Reflect

How can you justify a comparison of two numbers?

Math is... Mindset

How did you give positive feedback to your classmates?

Round Multi-Digit Numbers

Be Curious

What do you notice? What do you wonder?

One director said there were about 40,000 visitors at the museum in one month.

Another director said there were about 35,000 visitors at the museum in one month.

Math is... Mindset

How can behaving flexibly help you work with and learn from others?

Learn

A museum will give a free T-shirt to each visitor in August. The director expects that the number of visitors in August will be about the same as it was in June.

How many T-shirts should the museum director order?

You can round numbers to get a good estimate

One Way Use place value

Round to the nearest ten thousands

63,723

↓

60,000

Round to the nearest thousands

63,723

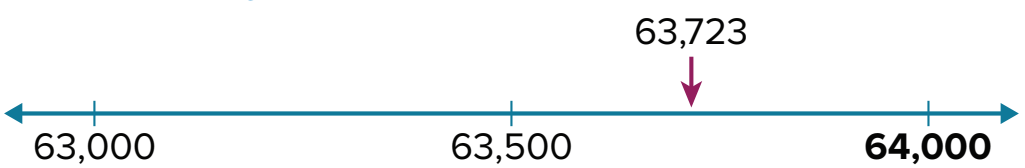
↓

64,000

Math is... Precision

To which place should the director round to get a good estimate?

Another Way Use a number line



The director should order 64,000 T-shirts.

You can round numbers to make estimates. Think about how precise the estimate needs to be when deciding to which place you will round.

Work Together

Each student who participates in field day will get a water bottle, but not all 1,528 students are expected to participate. What is a reasonable estimate of the number of water bottles to order?

On My Own

Name _____

How can you use place value to round the number as indicated?

1. 478,309 to the nearest thousand

2. 105,201 to the nearest hundred thousand

3. 95,550 to the nearest ten thousand

4. 132,847 to the nearest thousand

5. **STEM Connection** Denali National Park in Alaska has about 650,000 visitors each year. What could be the actual number of visitors in one year? Explain your reasoning.

6. Some astronauts will travel to the moon, which is 238,855 miles from the earth.

   a. About how many miles will the astronauts travel there and back? Explain the reasoning for your estimate.

   b. How accurate does the estimate need to be?

7. About 15,000 people live in a small town. What could be the actual number of people living in the town?

8. Mae rounds a number to the thousands place and gets 13,000. Eli rounds the same number to the hundreds place and gets 12,600. What is the greatest number that can be rounded as described?

9. Anna and her family will fly 4,387 miles to visit family. What's a reasonable estimate of the distance Anna will fly?

10. A sports stadium has seats for about 100,000 visitors. What could be the actual number of seats?

11. Leon is ordering water bottles for a sports event at which 1,255 people are expected. He plans to round to the nearest thousand to estimate the number of water bottles needed. How would you respond to Leon?

12. **Extend Your Thinking** Students have collected 1,475 cans for a food drive. Their goal is to collect 2,000 cans. About how many more cans do they need to collect?

Reflect

How did you apply what you already know about rounding during this lesson?

Math is... Mindset

How have you behaved flexibly while working with others?

Unit 2

Rounding Numbers

Name _____

1. If you round to the nearest hundred, which numbers round to 2,700? Choose all that apply.

a. 2,752
b. 2,735
c. 2,749
d. 2,599
e. 2,682
f. 2,650
g. 2,789
h. 2,649

Explain your choices.

2. If you round to the nearest hundred, which numbers round to 26,500? Choose all that apply.

a. 26,449
b. 26,385
c. 26,589
d. 25,389
e. 26,498
f. 26,451
g. 25,513
h. 25,499

Explain your choices.

3. If you round to the nearest thousand, which numbers round to 26,000? Choose all that apply.

a. 25,329

b. 25,781

c. 25,503

d. 25,899

e. 26,329

f. 26,585

g. 26,289

h. 24,792

Explain your choices.

Reflect On Your Learning

I am confused. — I'm still learning. — I understand. — I can teach someone else.

Unit Review

Name _____

Vocabulary Review

Match the word to the phrase that best describes it.

1. round (Lesson 2-4)	**A.** a way to write a number as a sum that shows the value of each digit
2. period (Lesson 2-2)	**B.** the form of a number that uses written words
3. expanded form (Lesson 2-1)	**C.** exactly half the distance between two given numbers
4. standard form (Lesson 2-2)	**D.** one way to determine a reasonable estimate
5. digit (Lesson 2-1)	**E.** the usual way of writing a number that shows only its digits
6. word form (Lesson 2-2)	**F.** a grouping of three digits in greater numbers
7. halfway point (Lesson 2-4)	**G.** a symbol used to write numbers

Review

8. What is the relationship between the two 4 digits in the number 904,467? (Lesson 2-1)

9. Which number represents sixty-two thousand, four hundred ninety-five? Choose the correct answer. (Lesson 2-2)

A. 620,495

B. 624,95

C. 62,495

D. 62,400,095

10. A school raised $8,875. Which shows a reasonable estimate of the amount the school raised? Choose the correct answer. (Lesson 2-4)

A. $9,500 **B.** $9,000

C. $7,000 **D.** $8,000

11. What is the value of the digit 2 in 143,287? (Lesson 2-1)

12. What is the word form of 9,284? (Lesson 2-2)

13. In which number does the digit 2 have a value that is ten times the value of the digit 2 in 12,738? Choose the correct answer. (Lesson 2-1)

A. 26 **B.** 215

C. 2,387 **D.** 23,901

14. Which of the following are different ways to represent the number 40,381? Choose all that apply. (Lesson 2-2)

A. 4,000 + 300 + 80 + 1

B. Forty thousand, three hundred eighty-one

C. 40,000 + 300 + 80 + 1

D. Four thousand, three hundred eighty-one

E. 40,000 + 3,000 + 80 + 1

F. Forty, three hundred eighty-one

15. What is the value of each digit in the number shown? (Lesson 2-1)

Thousands Period			Ones Period		
hundreds	tens	ones	hundreds	tens	ones
	3	4	4	5	6

16. Michael was playing a video game with his friends. Each person recorded their score in a different form. Who had the highest score? Tell how you know. (Lesson 2-3)

Name	High Score
Paul	three thousand, two hundred fifty-eight
Susan	2,000 + 900 + 50 + 8
Michael	3,302

17. Which statements are true? Choose all that apply. (Lesson 2-3)

A. $2{,}315 > 1{,}319$

B. $2{,}315 < 1{,}319$

C. $1{,}319 > 2{,}315$

D. $2{,}315 = 1{,}319$

E. $1{,}319 < 2{,}315$

18. Keisha has about $3,000 in her saving account. What could be the exact amount in her savings account? Justify your answer. (Lesson 2-4)

19. Which statements are true? Choose all that apply. (Lesson 2-3)

A. $3{,}100 = 3{,}000 + 100$

B. $432{,}238 < 324{,}239$

C. two thousand, six $= 2{,}006$

D. $31{,}840 > 31{,}440$

20. In the number 3,665, how does the value of the digit 6 in the hundreds place compare to the value of the digit 6 in the tens place ? (Lesson 2-1)

21. What is 392,483 rounded to the nearest thousand? (Lesson 2-4)

22. What is 392,483 rounded to the nearest hundred thousand? (Lesson 2-4)

23. What is the relationship between the two 7 digits in the number 328,277? (Lesson 2-1)

Performance Task

National Park Visitors

There were 642,809 visitors to Denali National Park in Alaska in 2017. In 2015, there were 589,450 visitors to the park.

Part A: What is a reasonable estimate of the number of visitors to Denali National Park in 2017? Explain why it is a reasonable estimate.

Part B: How does the number of visitors to Denali in 2015 compare to the number of visitors in 2017? Write a math statement to represent the comparison. Justify your statement.

Part C: The number of visitors to Everglades National Park in Florida in 2017 was about 600,000. What could be the actual number of visitors to Everglades National Park in 2017? Defend your number.

Reflect

How does knowing the structure of multi-digit numbers help you work with these numbers?

Unit 2

Fluency Practice

Name _____

Fluency Strategy

You can decompose by place value to find the difference.

Decompose

653 − 212 = ?
212 = 200 + 10 + 2
So, 653 − 200 = 453
453 − 10 = 443
443 − 2 = 441
653 − 212 = 441

1. How can you decompose by place value to find the difference?

697 − 324 = ?

324 = _____ + _____ + ___

697 − _____ = 397

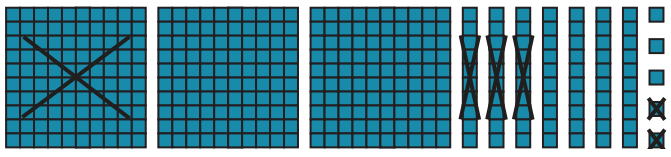
397 − _____ = 377

377 − ___ = _____

Fluency Flash

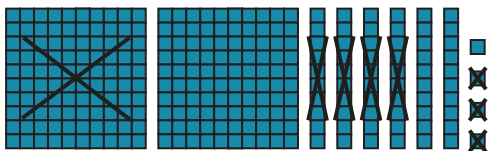
Use the base-ten blocks to write a matching equation.

2.



_____

3.



_____

Fluency Check

What is the sum or difference?

4. 739 − 428 = ? _____
5. 238 + 684 = ? _____
6. 723 + 246 = ? _____
7. 736 + 125 = ? _____
8. 858 − 615 = ? _____
9. 958 − 230 = ? _____
10. 684 − 152 = ? _____
11. 549 + 287 = ? _____
12. 164 + 528 = ? _____
13. 356 − 145 = ? _____
14. 674 − 213 = ? _____
15. 464 + 103 = ? _____

Fluency Talk

How would you explain to a friend how to decompose a number by place value to make subtraction easier?

How is using partial sums to add like decomposing a number by place value to subtract?

Unit 3

Place Value and Number Relationships

Focus Question

How can I extend my knowledge of place value to understand decimals?

STEM video | GO ONLINE

IGNITE!

Name _____

Number Lines

Consider the following numbers:

1.2 1.20 0.7 2.30 2.03 0.25 0.52 1 3.00 1.5

1. What sort of real-world situations might the above numbers represent?

_____

_____

_____

2. What do you notice about the numbers?

_____

_____

3. Rewrite each number in the list as a whole number, fraction, or mixed number.

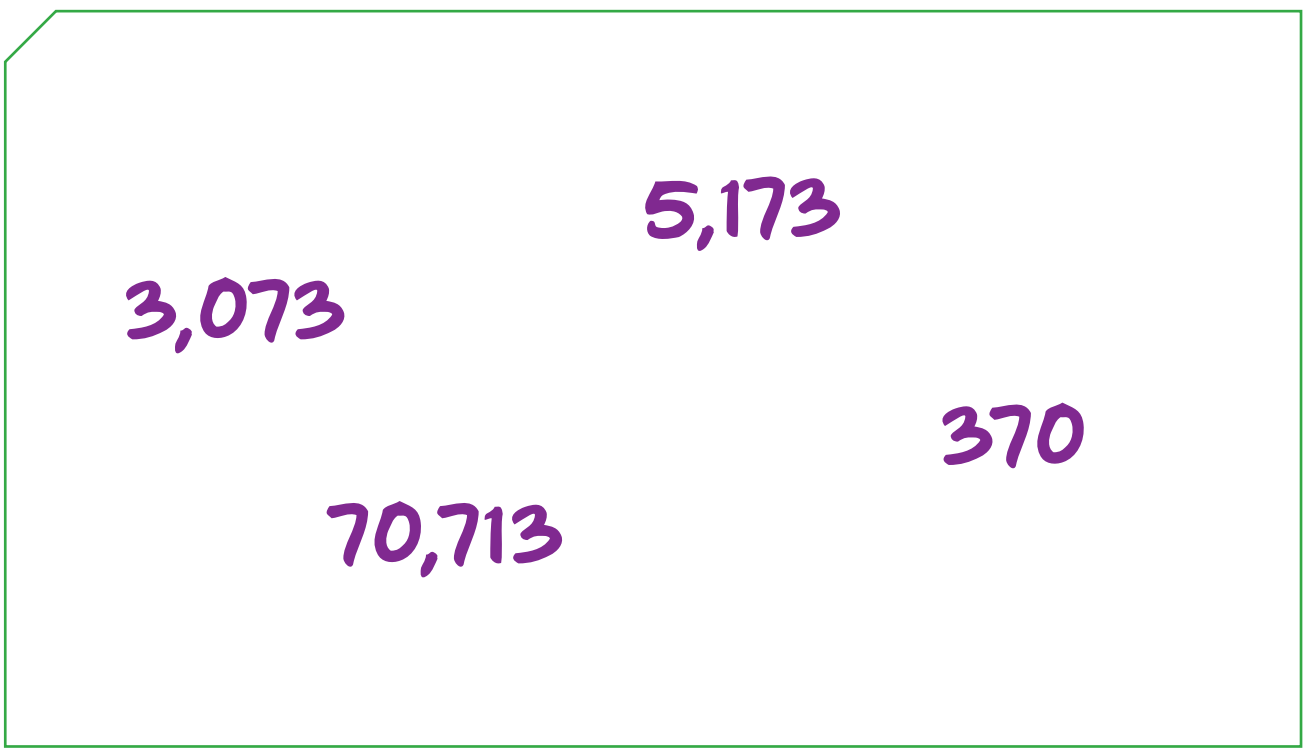
_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

4. Estimate the location of each number on the number line below. Draw a point for each number. Write the number as a decimal above the point; write the number as a whole number, fraction, or mixed number below the point.

Generalize Place Value

Be Curious

Which doesn't belong?



Math is... Mindset

How can you give positive feedback to your classmates today?

Learn

What are some ways to describe the relationship between the values of the digits in the number shown?

thousands	hundreds	tens	ones
7	7	7	7

You can describe the relationship between the place-value positions.

One Way Relate 7,000 to 700.

thousands	hundreds	tens	ones
7	7	7	7

$7{,}000 = 10 \times 700$

Each 7 is ten times the value of the 7 to the right.

Another Way Relate 700 to 7,000.

thousands	hundreds	tens	ones
7	7	7	7

700 is $\frac{1}{10}$ of 7,000.

Each 7 is $\frac{1}{10}$ the value of the 7 to the left.

Math is... Structure

What ideas have we learned before that were helpful in understanding this relationship?

A digit represents 10 times as much as it represents in the place to the right. It also represents $\frac{1}{10}$ the value of what it represents in the place to its left.

Work Together

What are two different ways to describe the relationship between the values of each digit 4 in 449,035?

On My Own

Name _____

Use the place-value chart to complete the sentence.

1. The value of the 6 in the hundreds place is _____ times the value of the 6 in the _____ place.

hundred thousands	ten thousands	thousands	hundreds	tens	ones
	3	2	5	6	5
	7	3	6	1	0

Complete the sentences to describe the relationship between the values of each digit 4 and each digit 9 in the number 447,699.

2. The value of the digit 4 in the ten thousands place is _____ the value of the digit 4 in the _____ place.

3. The value of the digit 9 in the _____ place is 10 times the value of the digit 9 in the _____ place.

Is each statement *true* or *false*?

4. The digit 3 in 5,630, is 10 times the value of the digit 3 in 342.

5. The digit 3 in 5,630, is $\frac{1}{10}$ the value of the digit 3 in 342.

6. The digit 3 in 5,630, is 10 times the value of the 3 in 13.

7. The digit 3 in 5,630, is $\frac{1}{10}$ the value of the digit 3 in 13.

8. On Tuesday, 600 people attended a play at the Children's Theatre. The same play had 6,000 attendees on Saturday.

When you compare 600 attendees to 6,000 attendees, 600 is _____ as much as 6,000.

9. How does the value of the 2 in the hundred thousands place relate to the value of the 2 in the ten thousands place?

hundred thousands	ten thousands	thousands	hundreds	tens	ones
2	2	9	0	3	5

10. How does the value of the 7 in the thousands place relate to the value of the 7 in the ten thousands place?

hundred thousands	ten thousands	thousands	hundreds	tens	ones
4	7	7	3	0	0

11. **STEM Connection** Studies show that the first observation of Halley's comet was in 466 B.C. What are two different ways to describe the relationship between the digits 6 in 466?

12. **Extend Your Thinking** Write a number so that the digit 5 has a value of 5,000 and is $\frac{1}{10}$ the value of the digit in the ten thousands place.

Reflect

How did I think like a mathematician today?

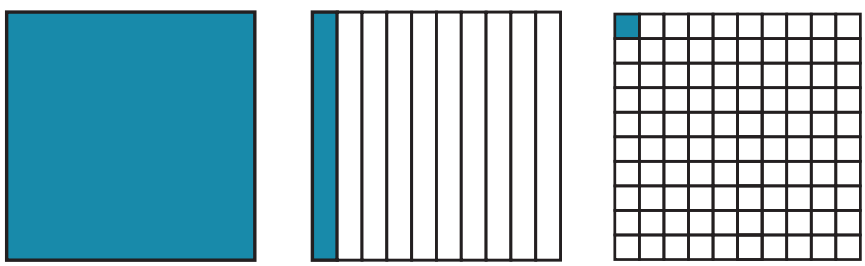
Math is... Mindset

How did you give positive feedback to your classmates today?

Extend Place Value to Decimals

Be Curious

What do you notice? What do you wonder?



Math is... Mindset

What are some ways you can avoid or manage stress?

Learn

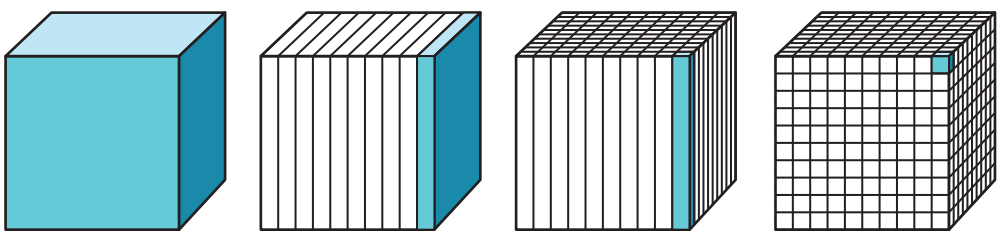
Keagan thinks that the value of each digit 1 is the same.

ones	tenths	hundredths	thousandths
1	1	1	1

How can you help Keagan make sense of this number?

Use a representation to show the value of each digit 1.

ones | tenths | hundredths | **thousandths**



1 | $\frac{1}{10}$ or 0.1 | $\frac{1}{100}$ or 0.01 | $\frac{1}{1,000}$ or 0.001

The value of the digit 1 depends on its position in the number.

Math is... Patterns

How is the name of the position related to the fractional part of the whole?

A digit in one place in a decimal number represents 10 times as much as it represents in the place to its right. It also represents $\frac{1}{10}$ the value of what it represents in the place to its left.

Work Together

What are two different ways to describe the relationship between the 0.8 and 0.08?

On My Own

Name _____

1. Which of the following statements is *true*?

- **A.** 0.009 is ten times 0.09
- **B.** 0.09 is ten times 0.009
- **C.** 0.09 is $\frac{1}{10}$ of 0.009
- **D.** 9 is $\frac{1}{10}$ of 0.9

2. Which of the following statements is *true*?

- **A.** 0.003 is $\frac{1}{10}$ of 0.03
- **B.** 0.03 is $\frac{1}{10}$ of 0.003
- **C.** 0.3 is ten times 0.003
- **D.** 3 is ten times 0.03

Marcella has $5.00, Niko has $0.50, and Benjamin has $0.05. Use this information to complete each sentence.

3. Benjamin has _____ the money Niko has.

4. Marcella has _____ the money Niko has.

Complete each sentence.

5. $9.00 is _____ $0.90.

6. $0.90 is _____ $9.00.

7. What are two different ways to describe the relationship between the values of each digit 4 in 3.244?

8. What are two different ways to describe the relationship between the values of each digit 2 in 2.257?

9. Error Analysis Toby writes the number 23.2 and says that the value of the digit 2 in the tens place is 10 times the value of the digit 2 in the tenths place. How do you respond to him?

10. For which numbers is the value of the digit 8 ten times the value of the digit 8 in the number 4.984?

A. 3.814 **B.** 5.820

C. 6.982 **D.** 8.492

11. STEM Connection The world's biggest submarine can sail at a speed of about 25.5 miles per hour on the surface. How can you describe the relationship between 5 and 0.5?

12. Extend Your Thinking Using only the digits 1, 4, and 5, write a number so that the value of the digit 5 is ten times the value of the digit 5 in the number 1.45. Write another number so that the value of the digit 4 is $\frac{1}{10}$ the value of the digit 4 in 1.45.

Reflect

How is the relationship between the values of digits in a decimal the same as the relationship between the values of digits in a whole number?

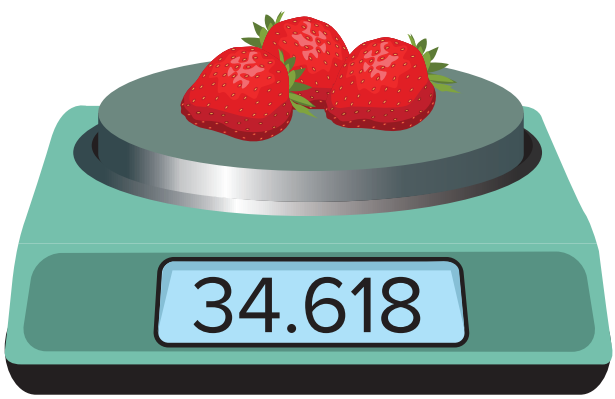
Math is... Mindset

What did you do to avoid or manage stress today?

Read and Write Decimals

Be Curious

What do you notice? What do you wonder?

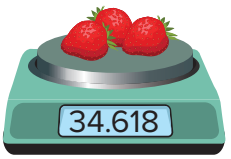


Math is... Mindset

Why is active listening important?

Learn

How can you read the mass of the strawberries?



You can use a place-value chart to help you identify the value of each digit.

Decimal numbers can be written in expanded form.

tens	ones	tenths	hundredths	thousandths
3	4	6	1	8

$30 + 4 + 0.6 + 0.01 + 0.008$

$30 + 4 + \frac{6}{10} + \frac{1}{100} + \frac{8}{1{,}000}$

Standard form uses digits and a decimal point.

34.618

The word form helps you read decimal numbers.

tens	ones	tenths	hundredths	thousandths
3	4	6	1	8

thirty-four and six hundred eighteen thousandths

Math is... Precision

Why is it important to include *and* when reading a decimal number?

Reading and writing decimal numbers follows the same patterns as reading and writing whole numbers.

Work Together

Carly wrote 0.83 in expanded form using multiplication. Is her work correct? Explain your reasoning.

$8 \times \frac{1}{10} + 3 \times \frac{1}{100}$

On My Own

Name _____

What is the word form of the decimal?

1. 8.2

2. 8.02

3. 0.82

4. 0.082

What is the standard form of the decimal?

5. 0.9 + 0.03 + 0.007

6. 20 + 0.7 + 0.08 + 0.006

7. 5 + 0.01 + 0.009

8. $7 + \frac{4}{10} + \frac{5}{1{,}000}$

What is each decimal in standard form?
What is each decimal in expanded form?

9. ninety-three and six thousandths

10. three and eight hundred forty-six thousandths

11. two hundred twelve and fifteen thousandths

12. seven hundred fifty-one thousandths

13. STEM Connection The Andromeda galaxy is 2.537 million light years from Earth. How can you write this decimal number in expanded form and in word form?

14. Kole wrote the decimal 34.821 in word form as *thirty-four eight hundred twenty-one thousandths*. Is he correct? Explain why or why not.

15. Extend Your Thinking Write the word forms of 321,578 and 321.578. What is the same? Explain why those similarities exist.

Reflect

How is place value used when writing decimal numbers in expanded form?

Math is... Mindset

What have you done to be an active listener today?

Compare Decimals

Be Curious

How are they the same? How are they different?

3.281 kg 3.095 kg 3.9 kg

Math is... Mindset

How can you recognize and respond to the emotions of others?

Learn

Which bag weighs more?

3.281 kg 3.095 kg

Compare the digits in each place starting with the greatest place-value position.

ones	tenths	hundredths	thousandths
3	2	8	1
3	0	9	5

Both numbers have 3 ones.

2 tenths > 0 tenths

Math is... Thinking

Why was it not necessary to compare the hundredths place?

3.281 > 3.095. So, the purple bag weighs more than the red bag.

You can compare decimals the same way you compare multi-digit numbers.

Work Together

Compare the weights of these bags.

ones	tenths	hundredths	thousandths
3	2	8	1
3	9		

3.281 ◯ 3.9

3.281 kg 3.9 kg

On My Own

MATH REPLAY GO ONLINE

Name _____

Write >, <, or = in each ◯ to make a true comparison. You can use a place-value chart to help.

1. 7.790 ◯ 8.7

2. 1.021 ◯ 1.095

3. 6.55 ◯ 5.66

4. 9.9 ◯ 0.99

5. 3.41 ◯ 3.41

6. 2.563 ◯ 2.573

For exercises 7–9, use the cost of each school supply.

7. Do the pencils or the highlighters cost more?

8. Write a comparison statement for the cost of the pens and the pencils.

9. Which school supply is the most expensive? Which school supply is the least expensive? Explain how you know.

10. Error Analysis An astronomer calculated that a comet traveled 192.40 kilometers. The astronomer wrote 192.4 kilometers on a chart. How do you respond to the astronomer?

11. Write a comparison statement that compares the speed of a quarter horse to the speed of a lion.

88.5 km per hour

80.5 km per hour

12. Which of the following comparisons are *true*?

A. $0.773 > 1.773$

B. $101.020 = 101.02$

C. $0.04 < 0.4$

D. $0.321 < 0.0123$

13. Extend Your Thinking Use the digits 5, 7, 8, and 9 to create the greatest possible decimal number.

□.□□□

Reflect

How is comparing decimals similar to comparing whole numbers?

Math is... Mindset

How did you recognize and respond to the emotions of others?

Unit 3

Comparing Decimals

Name _____

Compare the decimals by choosing >, <, or =.

1. 0.035 ☐ 0.35

Circle the symbol that goes in the ☐.

> < =

Explain or show why you chose that symbol.

2. 0.27 ☐ 0.235

Circle the symbol that goes in the ☐.

> < =

Explain or show why you chose that symbol.

3. 0.4 ☐ 0.575

Circle the symbol that goes in the ☐.

> < =

Explain or show why you chose that symbol.

4. 0.47 ☐ 0.470

Circle the symbol that goes in the ☐.

> < =

Explain or show why you chose that symbol.

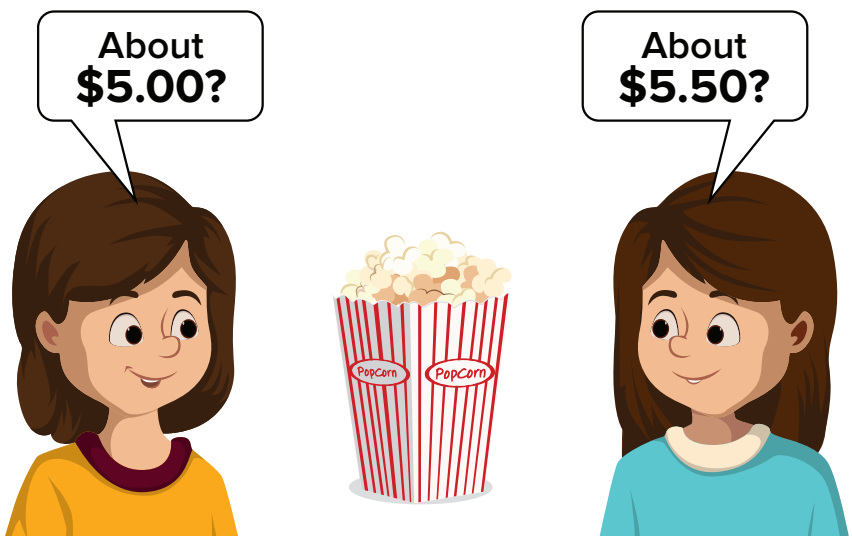
Reflect On Your Learning

I'm confused. | I'm still learning. | I understand. | I can teach someone else.

Use Place Value to Round Decimals

Be Curious

What do you notice? What do you wonder?



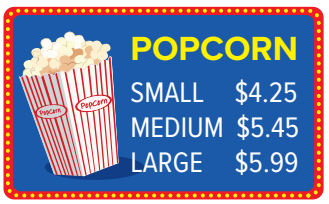
Math is... Mindset

What was challenging for you?
What have you enjoyed?

Learn

Maya and her sister want to buy a medium popcorn.

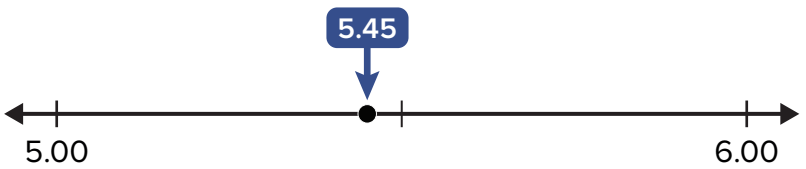
About how much money do they need?



You can round decimals to get a good estimate.

One Way Use a number line

Round to the ones.



The bag of popcorn costs about $5.00.

Math is... Precision

What do you notice about the estimate when rounding to lesser place value positions?

Another Way Use place value

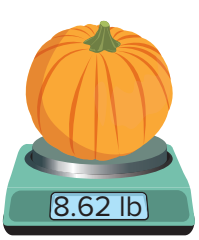
to the ones	to the tenths
5.45	5.45
↓	↓
5.00	5.50

Rounding to the nearest tenths gives a better estimate.
Maya and her sister need about $5.50 to buy a medium popcorn.

You can round decimals using number lines or place value to make reasonable estimates. Think about how precise the estimate needs to be when deciding to which place you should round to.

Work Together

What is the weight of the pumpkin rounded to the nearest whole number? nearest tenth?



On My Own

MATH REPLAY GO ONLINE

Name _____

What is each decimal rounded to the nearest whole number? You can use a number line or place value.

1. 78.39

2. 4.07

3. 12.7

4. 15.55

What is each decimal rounded to the nearest tenth? You can use a number line or place value.

5. 42.89

6. 3.65

7. 16.12

8. 98.17

9. Danica rounded a number to the nearest tenth to get 14.7. What number could she have rounded to get this answer?

10. Which statements are *true*?

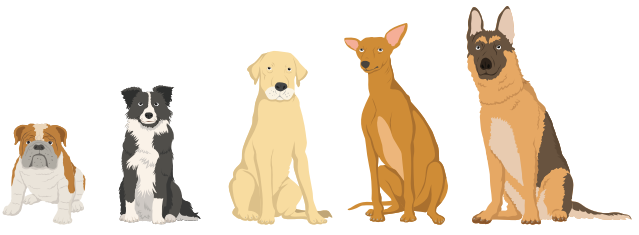
A. The decimal 43.678 rounded to the nearest tenth is 43.6.

B. The decimal 43.678 rounded to the nearest tenth is 43.7.

C. The decimal 43.678 rounded to the nearest hundredth is 43.68.

D. The decimal 43.678 rounded to the nearest hundredth is 43.67.

11. The masses of five different dogs are shown. Round each mass to the nearest whole number.



22.8 kg 25.4 kg 27.1 kg 25.8 kg 26.7 kg

12. STEM Connection The mass of the sun takes up about 99.86% of the mass of our solar system. What is 99.86 rounded to the nearest tenth?

13. Which of the following numbers are closer to 100? Which are closer to 99?

99.03 99.87 99.49 99.27 99.72

14. Extend Your Thinking The price of a container of orange juice, rounded to the nearest one is $3.00. Between what two amounts could the actual price be?

Reflect

How is rounding decimals similar to rounding whole numbers?

Math is... Mindset

What have you done well today?
What did you do that helped you?

Unit Review

Name _____

Vocabulary Review

Choose the correct word(s) to complete each sentence.

decimal	tenths
place value	hundredths
decimal point	thousandths

1. A _____ is a period that separates the ones and the tenths in a decimal number. (Lesson 3-2)

2. _____ is a place value position. It represents $\frac{1}{1{,}000}$ of a whole. (Lesson 3-2)

3. _____ is a place value position. It represents $\frac{1}{100}$ of a whole. (Lesson 3-2)

4. The value given to a digit by its position in a number is called _____. (Lesson 3-1)

5. A number that has a digit in the tenths place, hundredths place, and beyond is called a _____. (Lesson 3-2)

6. _____ is a place value position. It represents $\frac{1}{10}$ of a whole. (Lesson 3-2)

Review

7. Which statement correctly compares values of the digit 8 in 284,560 and 128,773? (Lesson 3-1)

A. The value of the digit 8 in 284,560 is $\frac{1}{10}$ the value of the digit 8 in 128,773.

B. The value of the digit 8 in 284,560 is 10 times the value of the digit 8 in 128,773.

C. The value of the digit 8 in 284,560 is 10,000 times the value of the digit 8 in 128,773.

8. Complete the sentence. (Lesson 3-3)

In standard form, the number *thirty-six and eight hundred fourteen thousandths is written* as _____

9. Determine whether each comparison is *true* or *false*. (Lesson 3-4)

	True	False
$0.49 < 0.5$		
$0.304 > 0.333$		
$0.019 < 0.09$		
$0.08 > 0.81$		
$0.111 < 0.11$		
$0.68 = 0.068$		

10. Complete each sentence. (Lesson 3-5)

0.737 rounded to the nearest hundredth is _____.

0.737 rounded to the nearest tenth is _____.

11. Do the numbers round to 8.1 when rounded to the nearest tenth? Choose *yes* or *no*. (Lesson 3-5)

	Yes	No
7.99		
8.162		
8.074		
8.13		
8.012		

12. The table show the lengths of the tracks at Valley High School and Eastside High School. (Lesson 3-4)

School	Length of Track (in meters)
Valley H.S.	398.25
Eastside H.S.	398.09

Write a comparison using $>$, $<$, or $=$.

MATH REPLAY GO ONLINE

13. Which of the following statements is *true*? (Lesson 3-2)

A. 0.002 is 10 times 0.02

B. 0.02 is $\frac{1}{10}$ of 0.002

C. 0.02 is 10 times 0.002

D. 2 is $\frac{1}{10}$ of 0.2

14. Complete the sentence. (Lesson 3-2)

7 is _____ 0.7.

15. Complete the sentence. (Lesson 3-2)

0.05 is _____ 0.5.

16. Complete the expanded form of the number 8.207. (Lesson 3-3)

$8 + 2 \times \_\_\_\_ + \_\_\_\_ \times \frac{1}{1{,}000}$

17. Write the decimal number in standard form. (Lesson 3-3)

$3 \times \frac{1}{100} + 9 \times \frac{1}{1{,}000}$

18. Write 44.259 in word form. (Lesson 3-3)

19. List three different decimal numbers that, when rounded to the nearest tenth, round to 3.2. (Lesson 3-5)

20. Show two different ways to write the expanded form of the number 3.48. (Lesson 3-3)

Performance Task

There are eight planets in our solar system. Each planet orbits the sun at different speeds. Some planets have no moons and some planets have multiple moons!

PART A. The table shows length of time it takes Jupiter and Saturn to orbit the Sun in relation to Earth's orbit. Complete the table to show the word form and the expanded form of each speed.

Name	Orbit Speed (in Earth years)		
	Standard Form	Word Form	Expanded Form
Jupiter	11.86		
Saturn	29.4		

PART B. Jupiter has 67 confirmed moons. Each moon orbits at different speeds. One moon takes 259.22 Earth days to orbit Jupiter and another one takes 259.653 Earth days. Use $>$, $<$, or $=$ to compare the orbit speeds. Explain your answer.

Reflect

Explain how place value helps you understand the relationship between decimal places.

Unit 3

Fluency Practice

Name _____

Fluency Strategy

You can use an **algorithm** to add. Add the digits in the same place value.

Add the ones, tens, hundreds, then thousands.

Sometimes it is necessary to regroup.

2,431	+1 +1 +1 1,367
+ 3,247	+ 4,856
5,678	6,223

Fluency Flash

What is the sum?

1.

	thousands	hundreds	tens	ones
	3	5	0	2
+	4	1	9	6

2.

	thousands	hundreds	tens	ones
	6	4	2	8
+	1	2	5	3

Fluency Check

What is the sum or difference?

3. 1,397 + 248 = _____
4. 597 − 462 = _____
5. 899 − 654 = _____
6. 12,947 + 8,126 = _____
7. 34,510 + 21,468 = _____
8. 259 + 346 = _____
9. 2,345 + 7,413 = _____
10. 219 + 684 = _____
11. 2,468 + 3,579 = _____
12. 192 + 354 = _____

Fluency Talk

Explain to a friend how you know if you have to regroup when adding using an algorithm.

How is adding using partial sums similar to adding using an algorithm?

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