GRADE 4 VOLUME 1

Also available:

enVision Matemáticas

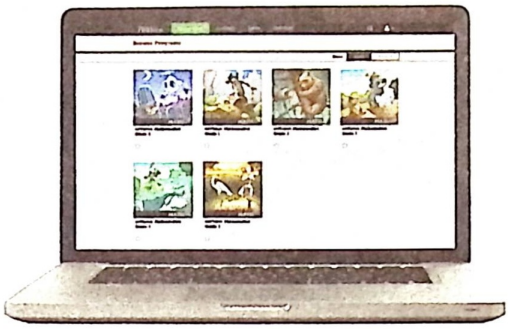
enVision® Mathematics

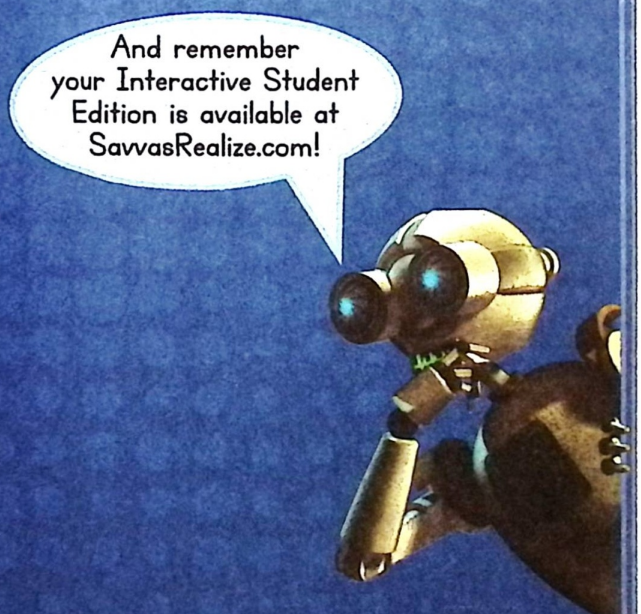
SAVVAS

Hi, we're here to help you.
Let's have a great year!
I'm Daniel.
I'm Marta.
I'm Emily.
I'm Jackson.
I'm Zeke.
I'm Carlos.
I'm Jada.
I'm Alex.

Contents

Digital Resources at SavvasRealize.com





TOPICS

1. Generalize Place Value Understanding
2. Fluently Add and Subtract Multi-Digit Whole Numbers
3. Use Strategies and Properties to Multiply by 1-Digit Numbers
4. Use Strategies and Properties to Multiply by 2-Digit Numbers
5. Use Strategies and Properties to Divide by 1-Digit Numbers
6. Use Operations with Whole Numbers to Solve Problems
7. Factors and Multiples
8. Extend Understanding of Fraction Equivalence and Ordering
9. Understand Addition and Subtraction of Fractions
10. Extend Multiplication Concepts to Fractions
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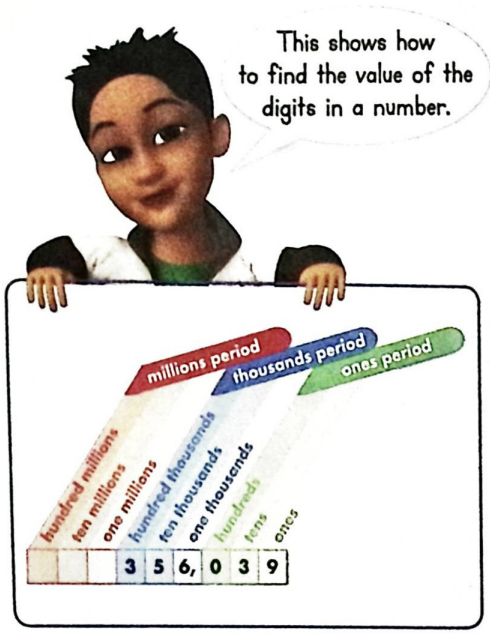
12. Understand and Compare Decimals
13. Measurement: Find Equivalence in Units of Measure
14. Algebra: Generate and Analyze Patterns
15. Geometric Measurement: Understand Concepts of Angles and Angle Measurement
16. Lines, Angles, and Shapes



TOPIC 1 Generalize Place Value Understanding

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$$\begin{array}{r} {\scriptstyle 1\ \ 1\ \ \ } \\ 9{,}263 \\ +\ 7{,}951 \\ \hline 17{,}214 \end{array}$$

TOPIC 2 Fluently Add and Subtract Multi-Digit Whole Numbers

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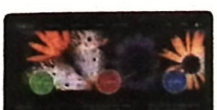
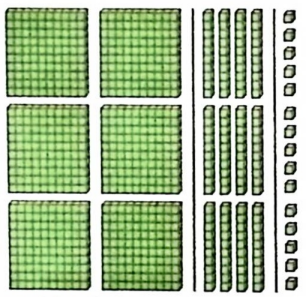


This shows how to use partial products to multiply.



$$\begin{array}{r} 245 \\ \times \quad 3 \\ \hline 15 \\ 120 \\ +\,600 \\ \hline 735 \end{array}$$

Partial products

TOPIC 3 Use Strategies and Properties to Multiply by 1-Digit Numbers

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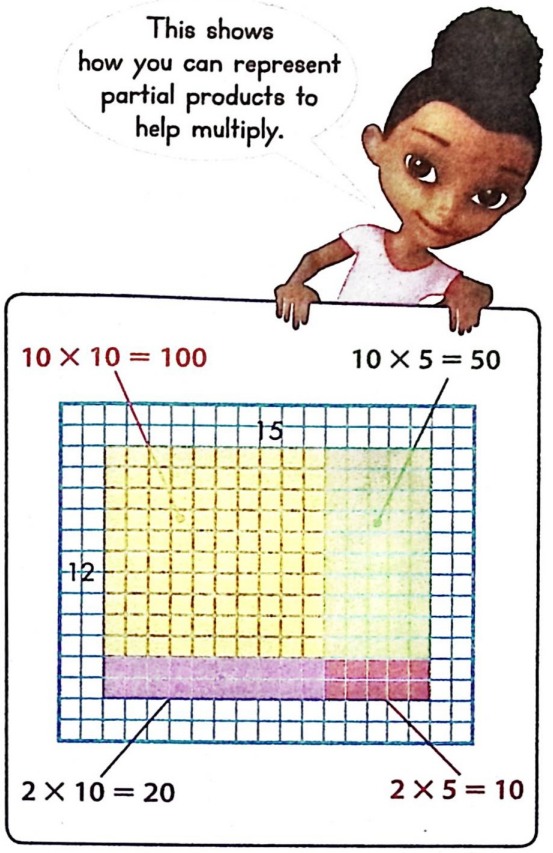

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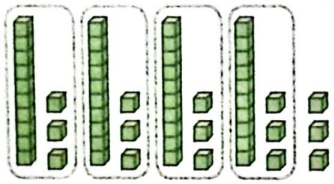
This shows how place value can help you divide.



$$\begin{array}{r} 3 \\ 10 \end{array}\Big\} 13 \text{ R}3$$

$$\begin{array}{r} 4\overline{)55} \\ -\ 40 \\ \hline 15 \\ -\ 12 \\ \hline 3 \end{array}$$

TOPIC 5 Use Strategies and Properties to Divide by 1-Digit Numbers

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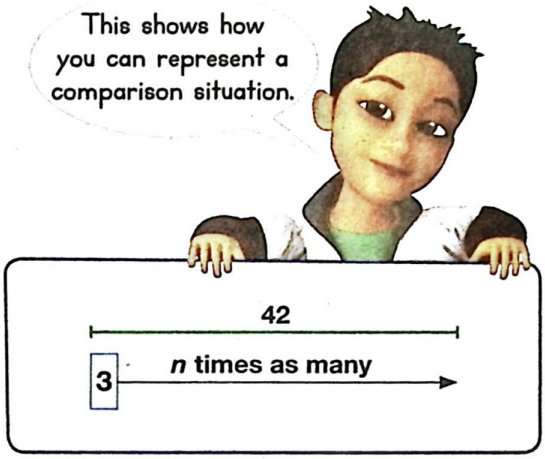

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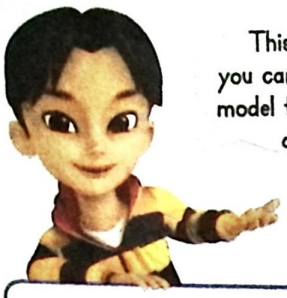

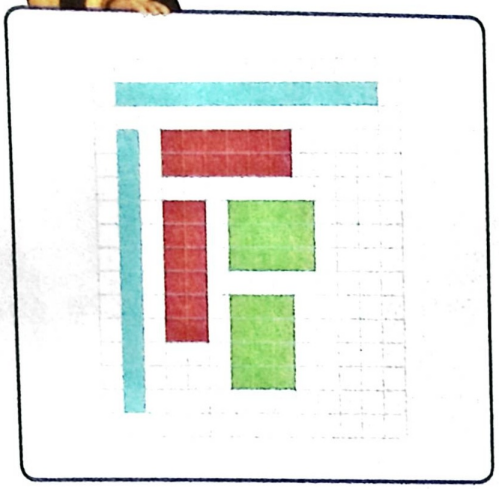

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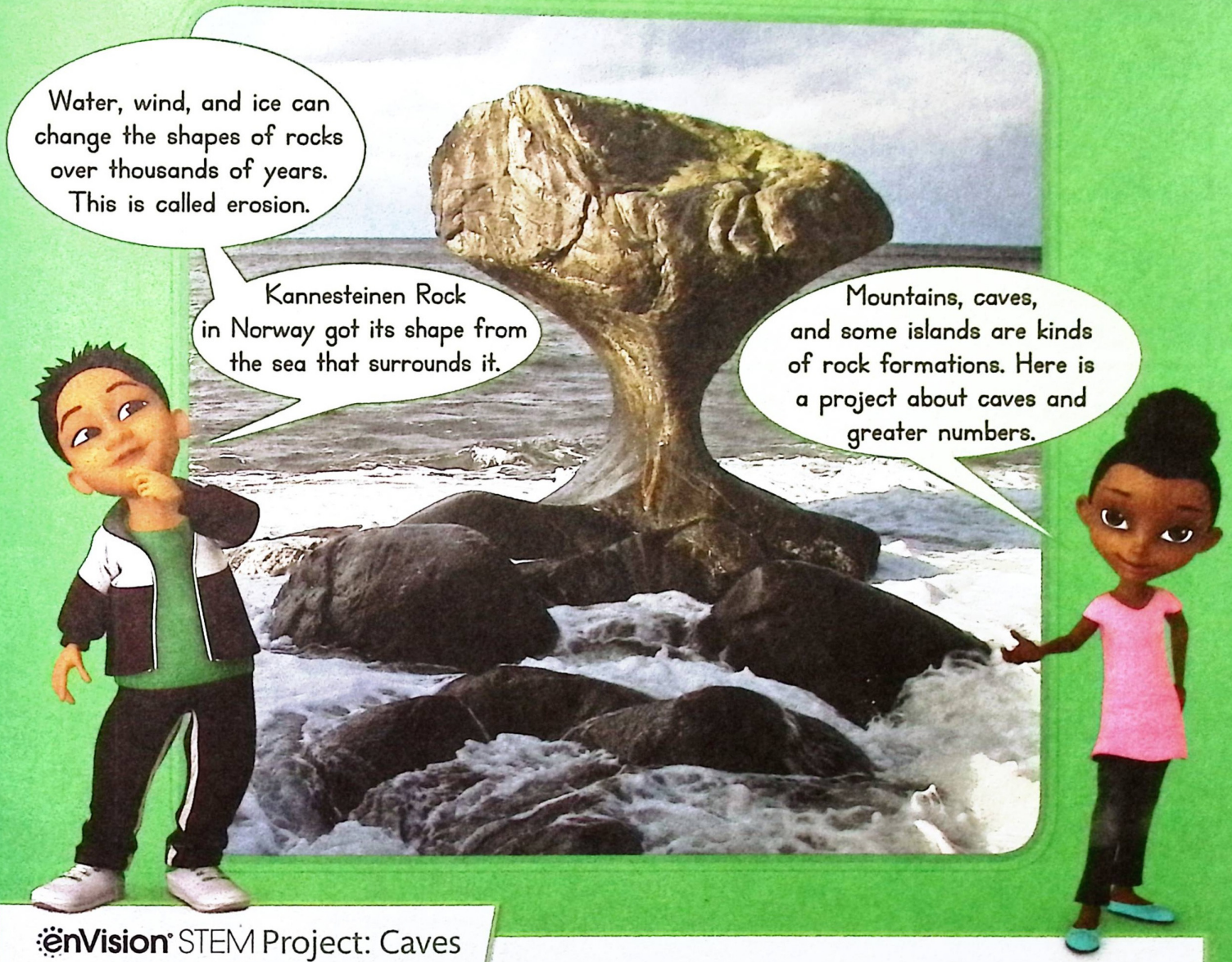
TOPIC 1

Generalize Place Value Understanding

Essential Questions: How are greater numbers written? How can whole numbers be compared? How are place values related?

Digital Resources

Interactive Student Edition · Activity · Visual Learning · Video · Practice · Assessment · Games · Tools · Glossary



enVision® STEM Project: Caves

Do Research Use the Internet or other sources to find the depths in feet of the 5 deepest caves in the world.

Journal: Write a Report Include what you found. Also in your report:

- Make a place-value chart that includes the five depths.
- Write each depth in expanded form.
- Use "greater than" or "less than" to compare the depths of two of the caves.

Name _____

Review What You Know

Vocabulary

Choose the best term from the box. Write it on the blank.

- expanded form
- number line
- number name
- place value
- rounding
- whole numbers

1. The numbers 0, 1, 2, 3, 4, and so on are called _____.
2. A number written using only words is written using a _____.
3. Replacing a number with a number that tells about how many or how much is called _____.
4. _____ is the value given to the place of a digit in a number.

Comparing Numbers

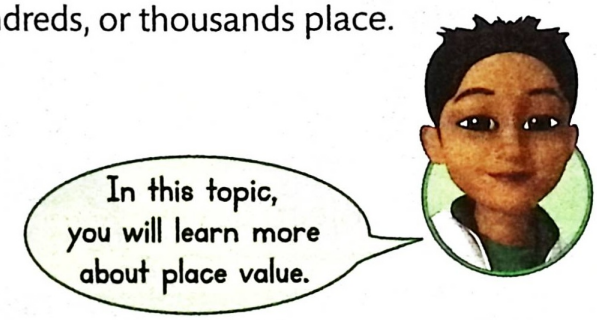
Compare each set of numbers using >, <, or =.

5. 201 ◯ 21
6. 313 ◯ 313
7. 289 ◯ 290
8. 7 ◯ 70
9. 725 ◯ 726
10. 82 ◯ 82
11. 614 ◯ 641
12. 618 ◯ 618
13. 978 ◯ 987

Place Value

Tell if the underlined digit is in the ones, tens, hundreds, or thousands place.

14. 9,482
15. 8,000
16. 1,506
17. 8,005
18. 5,100
19. 2,731



Rounding

20. **Construct Arguments** Use the number line to describe how to round 450 to the nearest hundred.

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Name _____

Pick a Project

PROJECT 1A

How many bones are in your body?

Project: Make a Bones Poster

PROJECT 1B

Would you like to be a construction manager?

Project: Design a Building

PROJECT 1C

Which stadium is your favorite?

Project: Create a Stadium Model

3-ACT MATH PREVIEW

Math Modeling

Page Through

Video

Before watching the video, think:

Last week, I read an entire book in one sitting. I could not put it down. How long is your reading list? Do you think this pile will take me a year to read? Time to get started.

I can ...

model with math to solve a problem that involves rounding, estimating, and computing with whole numbers.

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Name _____

Activity

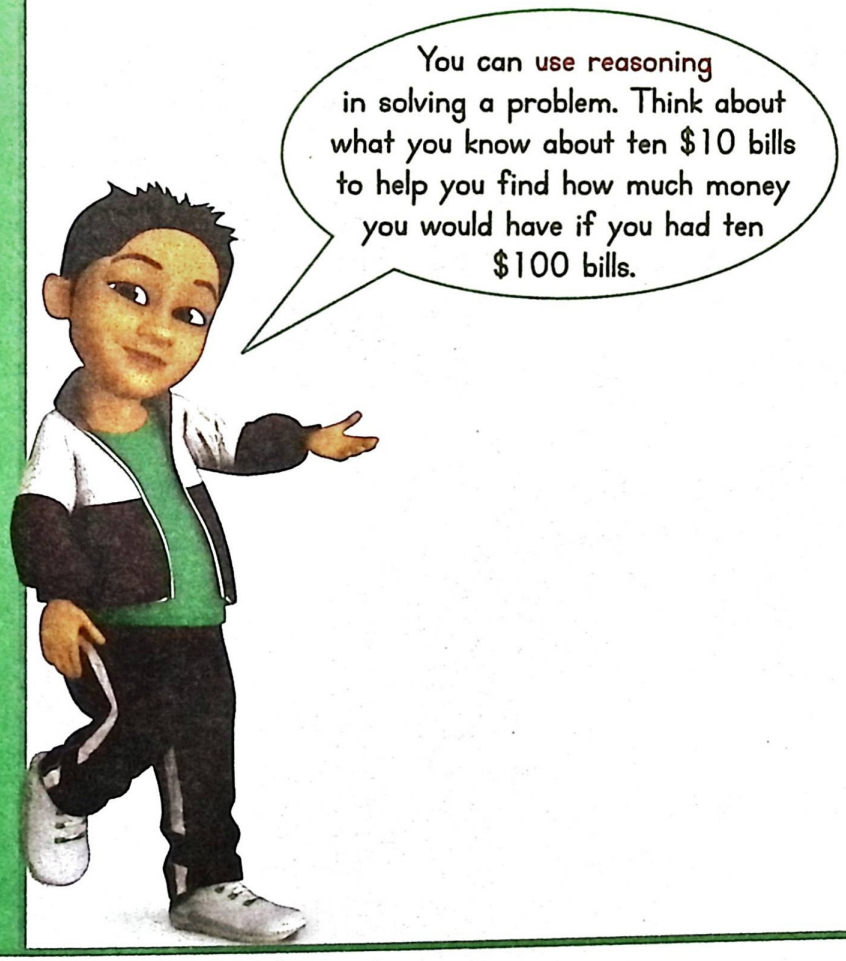
Lesson 1-1
Numbers Through One Million

I can ...
read and write numbers through one million in expanded form, with numerals, and using number names.

I can also reason about math.

Solve & Share

Mrs. Darcy saved ten $100 bills. How much money did Mrs. Darcy save?



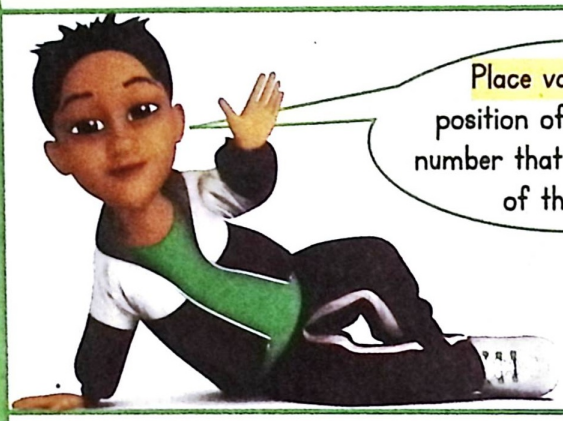
Look Back! How did you decide how many zeros you needed to write in your answer?

Essential Question

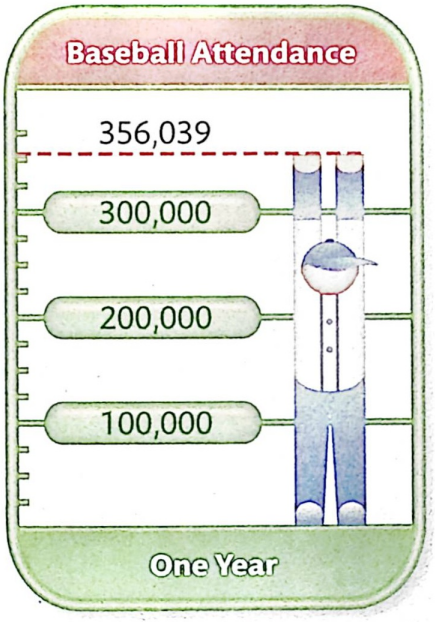
What Are Some Ways to Write Numbers to One Million?

A

The graph shows the attendance at a ballpark over one year. Write the total attendance in expanded form and using number names.

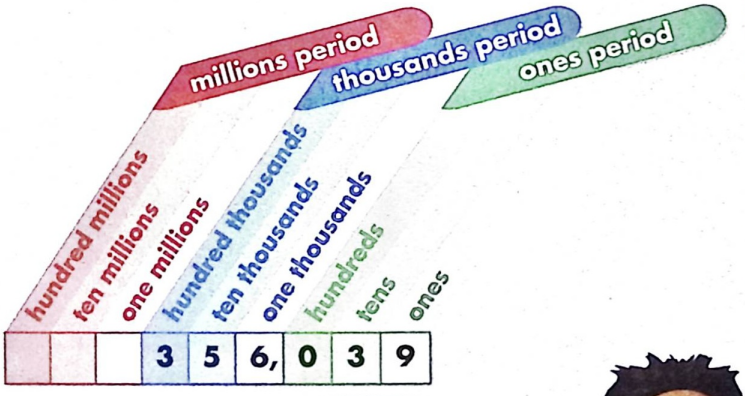


Place value is the position of a digit in a number that tells the value of the digit.



B

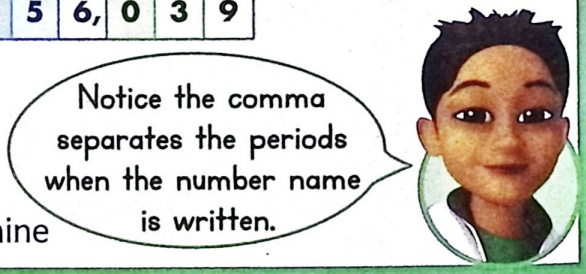
The place-value chart shows periods of three places, starting at the ones period from the right and including the thousands and millions period. Each period is separated by a comma and has three place values: ones, tens, and hundreds.



Each digit in 356,039 is written in its place on the chart. Expanded form shows the sum of the values of each digit.

Expanded form: 300,000 + 50,000 + 6,000 + 30 + 9

Number name: three hundred fifty-six thousand, thirty-nine



Convince Me! **Look for Relationships** What pattern exists in the three places in each period?

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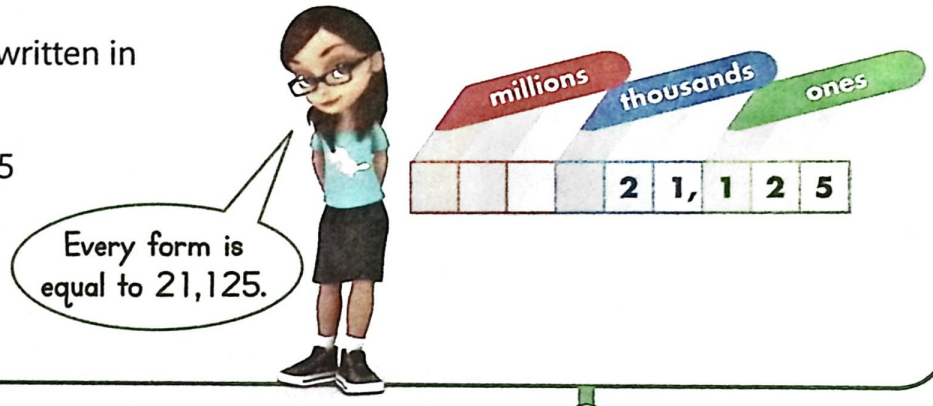
Name _____

Practice Tools Assessment

Another Example!

21,125 can be expanded and written in different ways.

20,000 + 1,000 + 100 + 20 + 5
21,000 + 100 + 25
20,000 + 1,100 + 20 + 5



Guided Practice

Do You Understand?

1. What do you notice about the comma in the number on the previous page?

2. Write an example of a number that would include 2 commas.

Do You Know How?

3. Write 7,320 in expanded form.

4. Write 55,426 using number names.

5. In a recent year, 284,604 fans attended the hockey playoffs in Chicago. What digit is in the thousands place in 284,604?

Independent Practice

For **6–8**, write each number in expanded form.

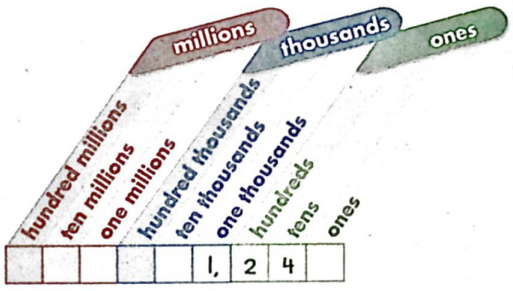
6. 7,622 **7.** 294,160 **8.** 43,702

For **9–11**, write each number name.

9. 1,688 **10.** 331,872 **11.** 44,444

Problem Solving

12. Letitia wrote one thousand, two hundred four in a place-value chart. What mistake did she make?



13. Reasoning In 2016, the world's oldest tree was 5,066 years old. Write the number that is one hundred more using number names.

14. Jessica wants to buy a new team jacket that costs $35. If Jessica saves $5 a week for 4 weeks and $4 a week for 3 weeks, will she have enough money to buy the team jacket? Explain.

15. Vocabulary Drew wrote the following sentence: "A period is a group of any 3 three digits in a number." Do you agree with Drew? If not, how would you correct him?

16. Higher Order Thinking Two numbers have the same digit in the millions period, the same digits in the thousands period, and the same digits in the ones period. Do these two numbers have the same value? Explain.

Assessment Practice

17. Wallace writes the number 72,204 in a place-value chart. Select the places that will be filled on the chart.

- ☐ Ones
- ☐ Tens
- ☐ Thousands
- ☐ Ten thousands
- ☐ Hundred thousands

18. Select all that are equal to 96,014.

- ☐ 96,000 + 10 + 4
- ☐ 90,000 + 60,000 + 10 + 4
- ☐ 90,000 + 6,000 + 4
- ☐ 90,000 + 6,000 + 10 + 4
- ☐ 96,000 + 14

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Name _____ Activity

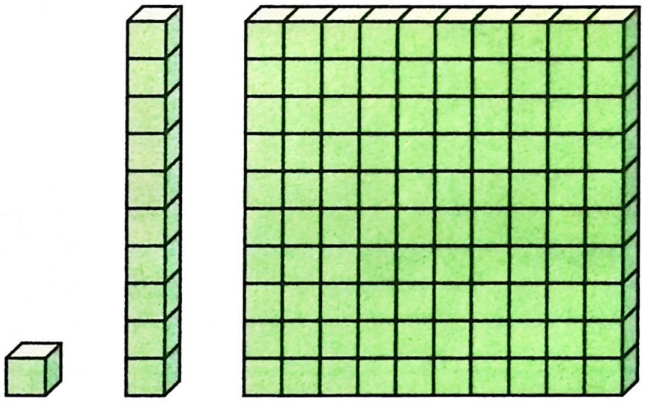
Lesson 1-2
Place Value Relationships

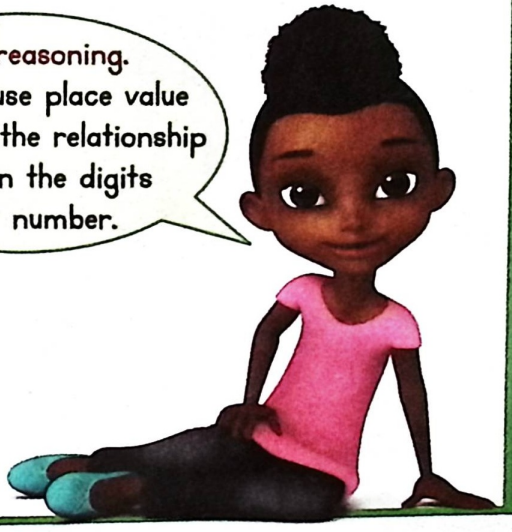
I can ...
recognize that a digit in one place has ten times the value of the same digit in the place to its right.

I can also generalize from examples.

Solve & Share

Place-value blocks are shown below for 1, 10, and 100. What patterns in the shapes and sizes of the blocks do you see?





Look Back! Describe two ways 100 and 10 are related.

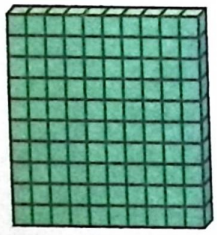
Essential Question

How Are Place Values Related to Each Other?

A

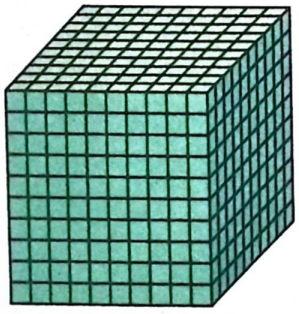
Kiana had bottle caps. She wants to collect ten times as many bottle caps. How many bottle caps will Kiana have in her collection then?

B A hundreds flat represents 100 bottle caps.



100

C To find ten times as many bottle caps, group 10 hundreds flats together.



1,000

One thousand is ten times 100.

$100 \times 10 = 1{,}000$

One hundred is one-tenth of 1,000.

$1{,}000 \div 10 = 100$

Kiana will have 1,000 bottle caps in her collection.

Convince Me! **Generalize** Use place-value blocks to model 1 and 10, 10 and 100, 100 and 1,000. What pattern do you see?

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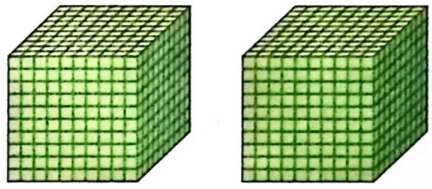
Name _____

Another Example!

Joe scored 2,000 points on a progressive video game. It took him 5 weeks to get his total point value to 20,000. It took him 3 months to get his total point value to 200,000 points. How many times greater than his first score were his points after 5 weeks? After 3 months?



After 5 weeks, Joe's points were 10 times greater. $2{,}000 \times 10 = 20{,}000$

After 3 months, Joe's points were 100 times greater. $20{,}000 \times 10 = 200{,}000$

$10 \times 10 = 100$

Guided Practice

Do You Understand?

1. Is the value of the 2 in 23,406 ten times as great as the value of the 3? Explain.

Do You Know How?

For **2**, use the relationship between the values of the digits to solve.

2. Write a number in which the value of the 3 is ten times greater than the value of the 3 in 135,864.

Independent Practice

For **3–5**, use the relationship between the values of the digits to solve.

3. Baseten School District bought 5,000 pencils. They are distributing the pencils evenly to 10 schools in the district. How many pencils will each school get?

4. Place Elementary School is raising money. They raise $90 a week. How long will it take them to raise $900?

5. A donation of 50 rulers was given to Value Elementary School. The school had 10 times as many erasers donated. How many erasers were donated?

Problem Solving

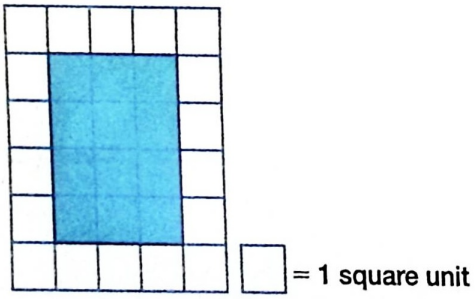
6. What can you say about the 3s in 43,862 and 75,398?

7. Critique Reasoning Mia says in 5,555, all the digits have the same value. Is Mia correct? Explain.

8. Number Sense In 1934, there was an extreme drought in the Great Plains. In the number 1,934, is the value of the 9 in the hundreds place ten times as great as the value of the 3 in the tens place? Explain.

9. Critique Reasoning Vin says in 4,346, one 4 is 10 times as great as the other 4. Is Vin correct? Explain.

10. Describe 2 ways to find the area of the shaded rectangle.



11. Higher Order Thinking In 448,244, how is the relationship between the first pair of 4s the same as the relationship between the second pair of 4s?

Assessment Practice

12. Which group of numbers shows the values of the 4s in 44,492?

Ⓐ 40,000; 4,000; 400

Ⓑ 40,000; 400; 40

Ⓒ 4,000; 400; 4

Ⓓ 400; 40; 4

13. In which number is the value of the red digit ten times as great as the value of the blue digit?

Ⓐ **33**5,531

Ⓑ 33**5**,**5**31

Ⓒ 3**3**5,5**3**1

Ⓓ 335,5**31**

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Name _____ Activity

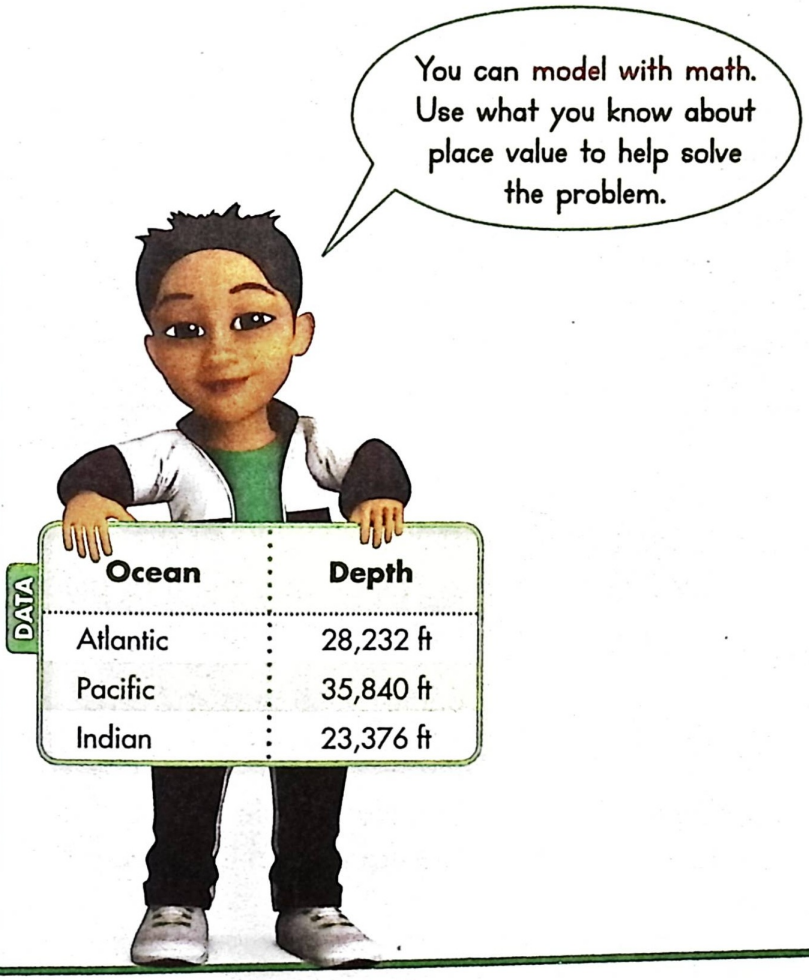
Lesson 1-3
Compare Whole Numbers

I can ...
use place value to compare numbers and record my comparisons using <, =, or >.

I can also model with math.

Solve & Share

A robotic submarine can dive to a depth of 26,000 feet. Which oceans can the submarine explore all the way to the bottom? ***Solve this problem any way you choose.***



Look Back! Which of the oceans listed is the shallowest? Explain.