Third Grade Curriculum
Composing/Decomposing Whole Numbers, Comparing, Ordering and Rounding

NOTE: ****Target Problems** are included for use in conjunction with the Teacher Notes. In the Practice Problems, some are marked with an "*". It is suggested that you include these problems in your unit. There is also a model window pane problem on some target problems to use as a Guided Practice. Additional problems are also included as needed.**

Place Value

TEKS: 3.2(A) compose and decompose numbers up to **100,000** as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate;

VOCABULARY: compose, decompose, regrouping (trading), hundred thousands, ten thousands, thousands, hundreds, tens, ones, place value, expanded form, word form, standard form, digit, ten times.

Background: In second grade, students used manipulatives to add and subtract. Using the Base-Ten system, the students regrouped manipulatives in order to trade-in place value representing groups to either borrow or carry in the appropriate math operation.

Materials: base 10 blocks per pair of students, Interactive Math Notebook (IMN), Recording Sheet, paper for anchor chart

Part I: Understanding Place Value with 3 Digit Numbers

** Introduction: Write a 5 on the board or on a sheet of paper. Have students tell you everything they know about this symbol using words or pictures (Answers may vary, may possibly include: name is five, 5 things *****, after 4, before 6, etc.) record student answers or have them record.

- "What is this symbol worth?" (5 things) Discuss with students that in this world there are lots of symbols – lots of letters and numbers and shapes. But numbers are special because even when they stand alone, all by themselves, they mean something. 5 means five things even when it stands all by itself. If you put a letter Q all by itself, does it mean anything? (No). It only means something when it stands next to other letters to make words like quarter or quick. So numbers are very special and different than letters.
- Have students share with a neighbor how a number is different than a letter. Then have them share back with the class.

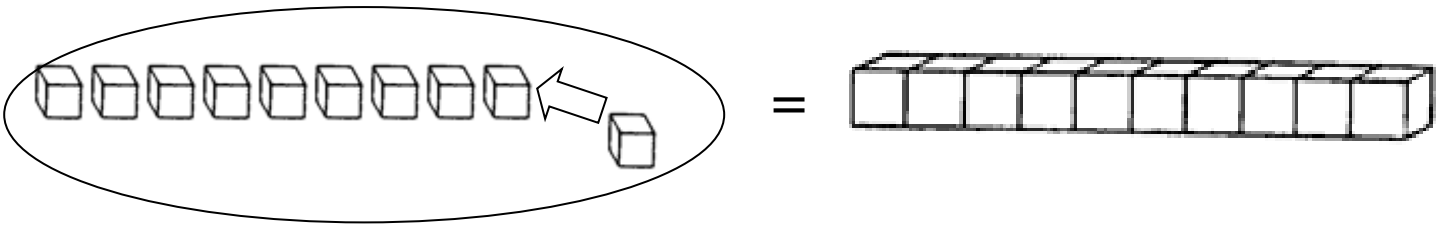
- Now back to the 5. Ask students, "Could I do anything to this 5 to change its value or worth?" (possible ideas: add, subtract) "What if there were a zero (0) to the right of the 5, (write 50) does that change its value?" (Yes) How? The value changed because now we have a 5 in the tens place and a 0 in the ones place. "What is the value of 50?" (50 things)

Lesson:

1. Ask students, "What do think place value means?" Have them discuss with their elbow partner and then share aloud. (The value of each digit, value depends on the location of the digit, value is how much the digit represents.)

2. Have students put the title "Place Value" in their Table of Contents in their IMN (Interactive Math Notebook) Have the students go to their next clean page and title the page on the right (teacher input) "Place Value."

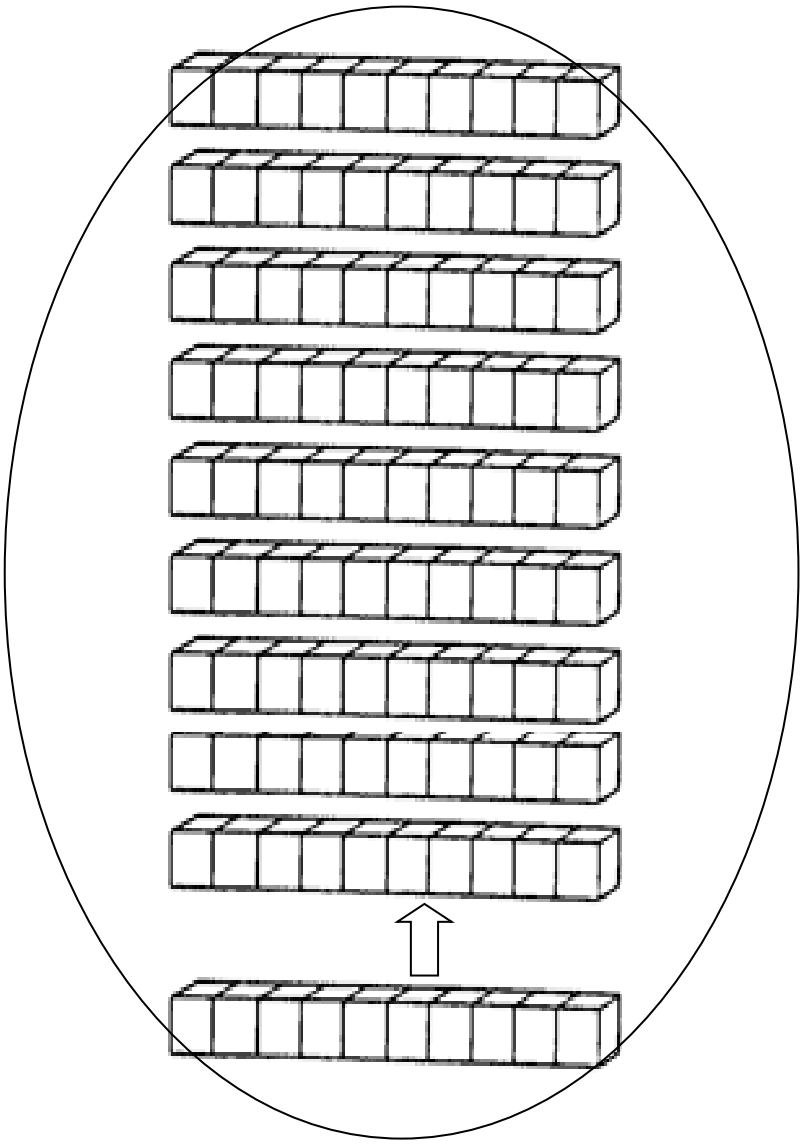
3. Using the base 10 blocks, have students take out 1 unit. Ask students, "What does this represent?" (the ones) "What can I do with it." (count / put them together) Demonstrate by counting with them – 1, 2, 3, 4, 5, 6, 7, 8, 9…10."What happens to the units when I reach 10" (trade for a rod / tens). Discuss that since you have to trade when you reach 10 then the unit blocks can only represent 1, 2, 3, 4, 5, 6, 7, 8, and 9, or what is called the digits 1-9. What happens if I add one more to the group?" (you get one group of 10, you trade the ones (units) for the one group of ten (rod) "Show me what you mean by using the base 10 blocks."



10 ones = 1 group of ten

4. "Could we say that we used the ones 10 times to equal 1 group of ten?" (yes)

5. "Awesome. Now, talk with your partner about what the rod represents." After some wait time, have students share. (1 group of ten) "What do we know about the tens?" (put them together to get 100's, count by tens) Practice counting by tens – 10, 20, 30, 40, 50, 60, 70, 80, 90……100. "What happens when I reach 100?" (trade it for a hundred/flat) Discuss that if I have to trade in for a flat when I reach 100, then my tens or rods can only represent the numbers 10-20-30-40-50-60-70-80-90 plus 9 units (91,92,93,94,95,96,97,98,99) or what we say is the values 10-90. "What would happen if I added 1 more to the group of 99?" (get 100 and trade in for a group of a hundred/flat) "Show me what you mean by using the base 10 blocks."



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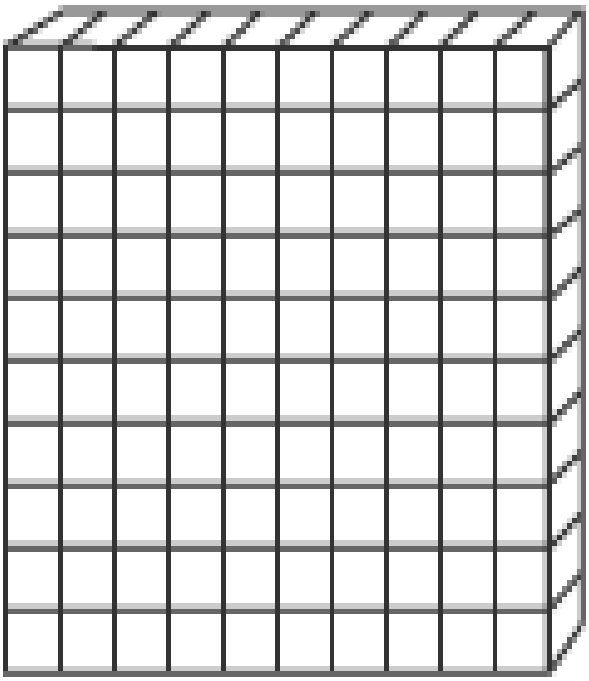


10 groups of ten = 1 group of a hundred (flat)

6. "So, could we say that we used the tens ten times to equal 1 group of a hundred?" (Yes)

7. "Super." Write the following on the anchor chart and have students help by filling in the missing numbers:

   _____ ones = 1 group of ten

   _____ groups of ten = 1 group of a hundred

8. Now write. 1 group of a hundred = ___ groups of tens = _____ ones (Provided as an IMN strip in resources of teacher notes pg.9)

9. Have students work together to fill in the above. (They can write this on the right side of their IMN.) They may also use their manipulatives to help them solve.

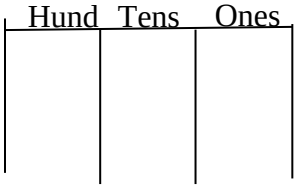
10. Have students share their findings and record on anchor chart.

    1 group of hundred = 10 group of tens = 100 ones

11. Now, have students share with their partner why the above is true.
12. On the left side (student output) of their IMN, have students record what they shared with their neighbor using pictures or words. (you may have them go back to their seats so they can use color)

13. "What did you use in 2nd grade that helped you organize the values of your numbers?" (A place value chart)

14. "What did it look like?" (It had a place for the ones, tens and hundreds) Have a student come draw it on the board.



15. "Let's put some digits in our place value chart."

Hund	Tens	Ones
2	7	5

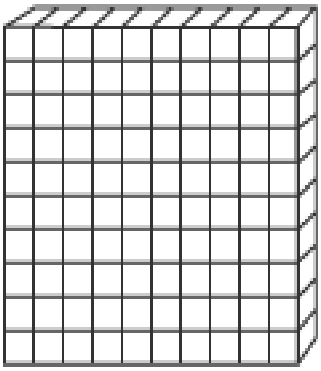
16. Have students share with their neighbor as many things as they can about what they see? Or notice?

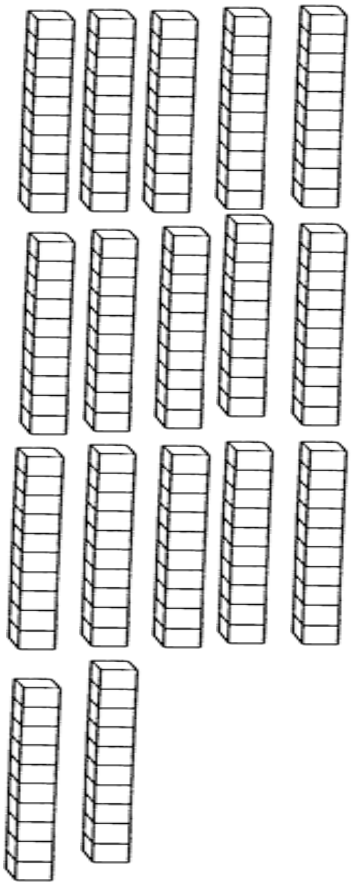
17. Now, have students share with class and have them explain their thinking. Some possible responses could be:
    - The digit in the tens place is larger than the digits in the ones and hundreds place (** Encourage students to think farther with this response as this is true for the face value of the digits but the true value of these digits is 200+70+5 and 70 is greater than 5 but not greater than 200)
    - 2 in the hundreds place, 7 in the tens place, 5 in the ones place (If students respond with this, ask them to think about what values these represent.)
    - 2 hundreds, 7 tens, and 5 ones (# of each hundred, tens and ones)
    - 200 + 70 + 5 (expanded form to show the values of each digit)
    - Two hundred and seventy five (word form) ****Remember to correct students to say "two hundred seventy five" because adding an **AND** anywhere in the middle will represent a decimal in later grades****

18. Now, we want students to start discovering other ways to represent 275. Please note that there are multiple ways students can show this.

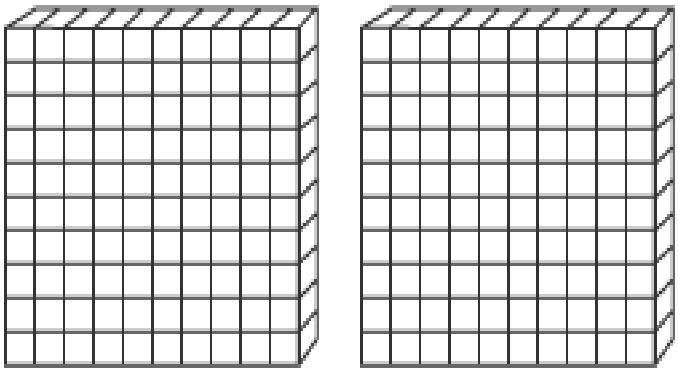
19. Have students go back to their seats to work cooperatively with their table using base 10 blocks.

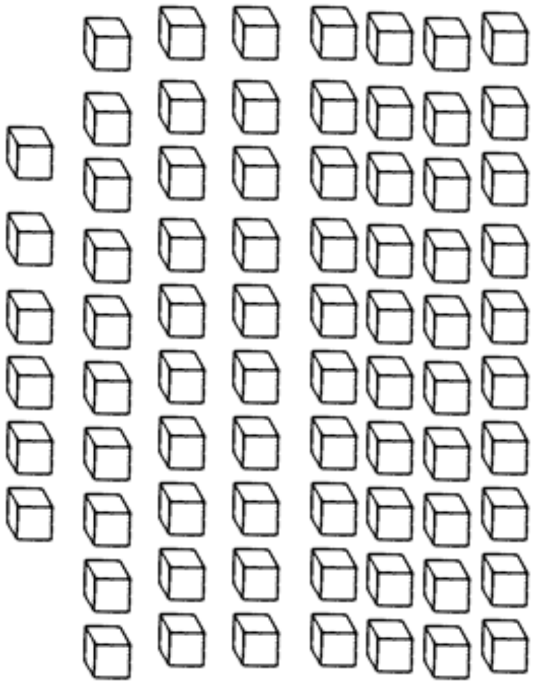
20. Let students know that we have already represented 275 with 2 hundreds (200), 7 tens (70), and 5 ones (5). Have them work with their table to come up with other ways to represent 275. Some examples could be (Encourage students to write the value of the base 10 blocks underneath the manipulatives):





1 group of a hundred 100	+	17 groups of ten 170	+	5 ones 5





2 groups of a hundred
200

+

75 ones
75

21. Have students share their responses. You could have students record other student responses on the right side of their IMN.

1 group of a hundred + 17 groups of ten + 5 ones = 275
100 + 170 + 5 = 275

2 groups of a hundred + 75 ones = 275
200 + 75 = 275

22. Continue to have students work in table groups and give them 3 digit numbers. Students can record how to read the number in words on the Recording Sheet A provided (pg 8). After giving students time to create a way to represent the number, have each table group share and students can record each other's findings on Recording Sheet A.
23. Journal Idea for left side of IMN: Why do you think it's important to understand the value of digits? Give some examples. (Remind students they can use pictures, words, graphic organizers help them explain what they know.)

Recording Sheet A

1. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

OR

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

2. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

OR

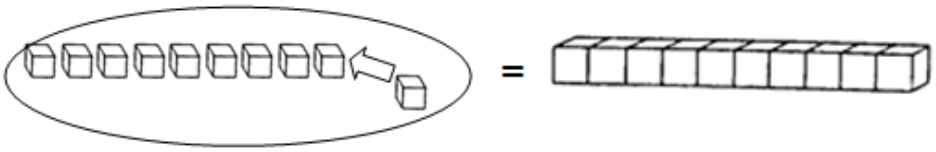
_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

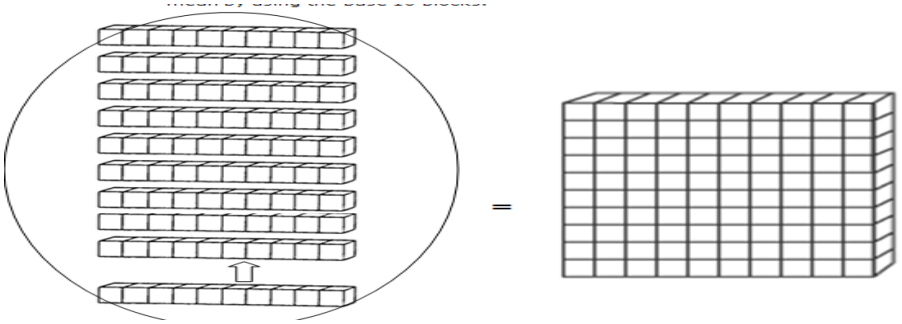
Sample Anchor chart

Place Value

____ ones = 1 group of ten



____ groups of ten = 1 group of a hundred



1 group of a hundred = 10 groups of ten = 100 ones

Resources: IMN Strips

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

1 group of a hundred = _____ groups of ten = _____ones

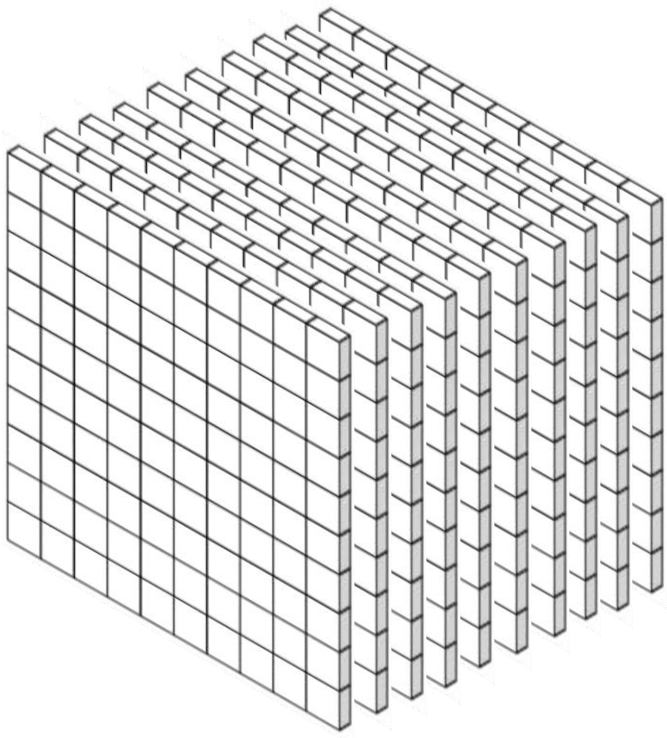
Part II: Understanding Place Value with 4 Digit Numbers

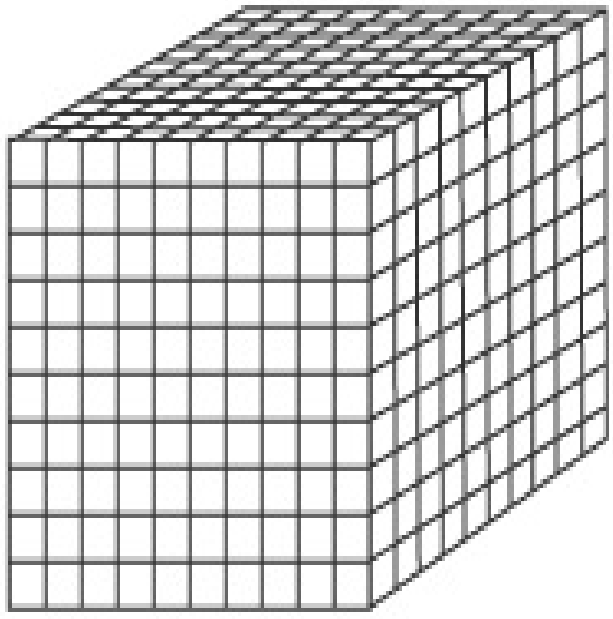
1. Journal idea for warm-up on left side of IMN (underneath what they did the day before) (Provided as an IMN strip in Teacher note pg. 23) Look at the following:

   349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning.

2. Have students share their journal responses with a partner and then with the class.
3. Review Anchor chart using leading questions such as:
   - How many ones makes a group of ten? (10)
   - How many times did you use ones to make a group of ten? (ten times)
   - How many groups of ten are in a group of a hundred? (10)
   - How many times did you use groups of ten to make a group of a hundred? (ten times)
4. Experience Before Label: Have students use only the hundreds (flats) to see how many they will need to make a group of one thousand. Some students may already recognize the pattern of ten. Others may need to count by 100's to discover that they need 10 groups of a hundred to equal 1 group of a thousand.



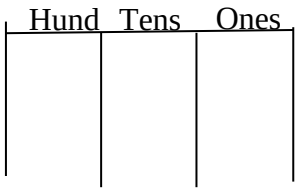


10 groups of a hundred = 1 group of a thousand

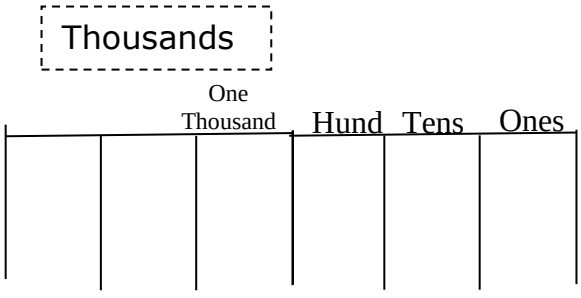
5. "So, could we say that we used the hundreds ten times to equal a group of 1 thousand?" (Yes)
6. Have students write on the right side of their IMN (same Place Value Page as the day before) 10 groups of a hundred = 1 group of a thousand
7. Now, write 1 group of a thousand = _____ groups of a hundred = _____ groups of ten =_____ ones (Provided as an IMN strip in teacher notes pg. 19)
8. Have students work together and use manipulatives to fill in the above.
9. Now, have students share their findings. (Add to Anchor chart)

1 group of a thousand = _____ groups of a hundred = _____ groups of ten = _____ ones

10. "What do we call our graphic organizer that helps us organize the value of our numbers." (Place Value Chart) "So far, what place values have we put in our Place Value Chart?" (Ones, Tens and Hundreds) Draw the Place Value chart on the board.

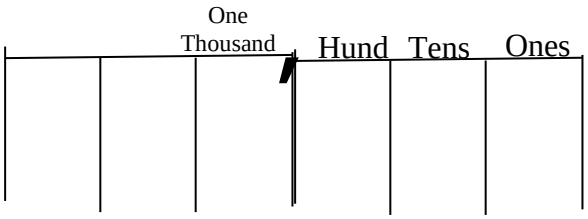


11. "What new place value have we talked about today?" (The thousands place)
12. Let students know that the thousands begins a new section of our place value chart.

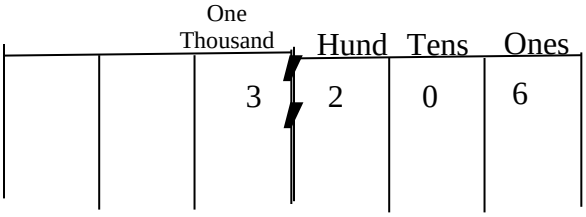


*** Note that the whole period is called the thousands. When talking about the one thousands place value, it is commonly shortened and called thousands.

13. "Now that we have a 4th place value, does anyone know what we put in between the one thousands place and the hundreds place?" (a comma) "Just like in reading". "Does anyone know why we use a comma?" (We use a comma in math similar to how we use a comma in reading. What does a comma mean in reading? It means to take a short breath and it separates a list of items. For example: Axle got a new shirt, pants and shoes for the new school year. The comma separates shirt from pants and signals a short breath as you read the two items. In math we use the comma between the one thousands place and the hundreds place to separate the two different periods or three-digit groups of place values and to signal a short breath as you read the number)



14. Have students draw the Place Value Chart on the right side of their IMN. You can also use a foldable provided in i-Xplore.
15. "Let's put some digits into our Place Value Chart."



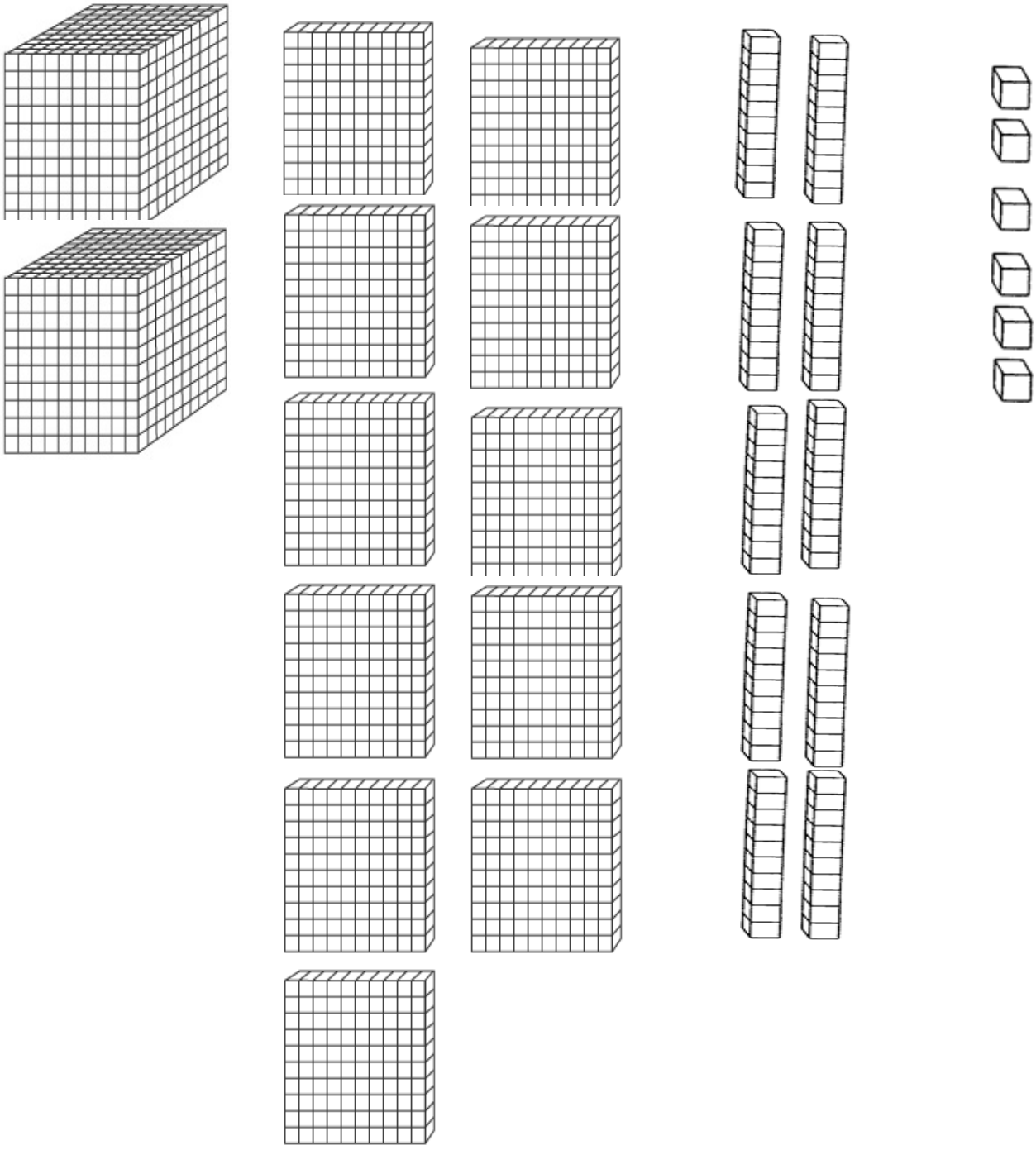
16. Have students discuss with their partner as many things as they can about what they see? Or notice?
17. Now, have students share with class and have them explain their thinking. Some possible responses could be:
    - The digit in the thousands place is larger than the digits in the tens and hundreds place(** Encourage students to think farther with this response as this is true for the face value of the digits

but the true value of these digits is 3,000+200+6 and 6 is greater than 0 but not greater than 200 and 3,000)

- There is a 0 in the tens place. Ask students, "What does that mean?"
- 3 in the thousands place, 2 in the hundreds place, 0 in the tens place, 6 in the ones place (If students respond with this, ask them to think about what values these represent.)
- 3 thousands, 2 hundreds, 0 tens, and 6 ones (# of each thousand, hundred, tens and ones)
- 3,000 + 200 + 0 + 6 (expanded form to show the values of each digit) Ask students "Is it necessary for us to write the 0?" (No) "Why?" **You will have to guide students through this answer.(because the number 3,000 and 200 both contain groups of ten. For example, how many groups of ten are in 200? 20. There are not any groups of tens that can't be grouped together to make hundreds or thousands, that's why we don't have to show our tens, because they are already grouped in 3,000 and 200.)
- Three thousand, Two hundred and six (word form) ***Remember to correct students to say "three thousand, two hundred six" because adding an **AND** anywhere in the middle will represent a decimal in later grades****

18. Now, we want students to start discovering other ways to represent 3,206. Please note that there are multiple ways students can show this.
19. Let students know that we have already represented 3,206 with 3 groups of a thousand (3,000) 2 groups of a hundred (200), 0 groups of tens (0), and 6 ones (6).
20. Dare or double dog dare students go back to their seats to work cooperatively with their table using base 10 blocks to create the number in the wildest way. Let student know that they may need to cooperatively work with another table so they have enough manipulatives.

21. Some examples could be (Encourage students to write the value of the base 10 blocks underneath the manipulatives):



2,000 + 1,100 + 100 +6

22. Continue to have students work in table groups and give them 4 digit numbers. Students can record how to read the number in words on the Recording Sheet A provided (pg 17). After giving students time to create a way to represent the number, have each table group share and students can record each other's findings on Recording Sheet A.

Recording Sheet A (Con't)

3. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

OR

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

4. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

OR

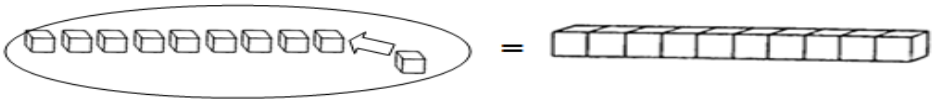
_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

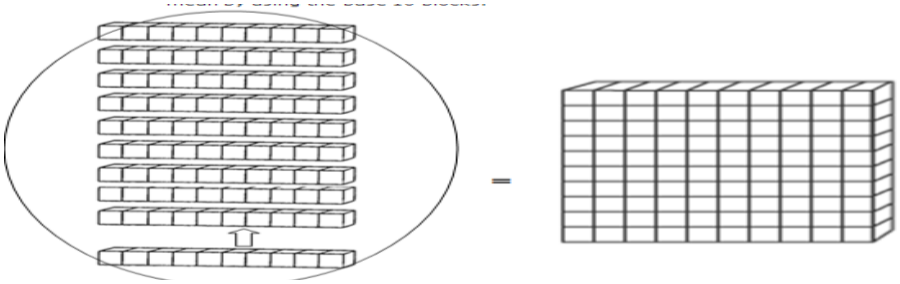
Sample Anchor Chart

Place Value

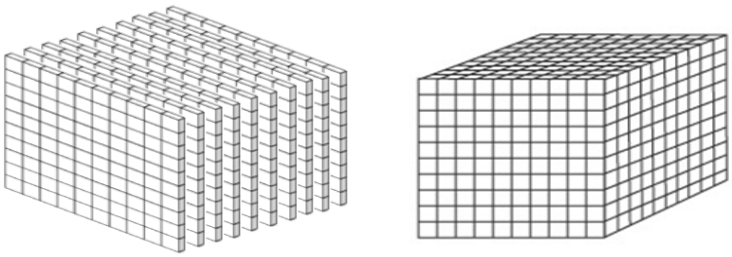
____ ones = 1 group of ten



____ tens = 1 group of a hundred



____ hundreds = 1 group of a thousand



1 group of a hundred = 10 groups of ten = 100 ones

1 group of a thousand = 10 groups of a hundred = 100 groups of ten = 1000 ones

Resources: IMN Strips (10/page)

1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

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1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

Guided Practice 1 and 2 using 3 and 4 digit Numbers

Guided Practice 1: Word form to Standard form

1. Display the following word problem.

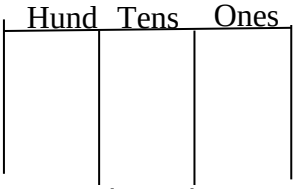
Normal lake level in Belton Lake is five hundred ninety-four feet. How is this number written in standard form?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea – Discuss with students how to summarize and condense the main idea of the question into a few important words. Abbreviations and symbols are encouraged. **# in standard form?**

Details/Known - Students may re-copy the number in words. They could also leave it blank. For **Known**, they might note "have to make PVC to hundreds place only."

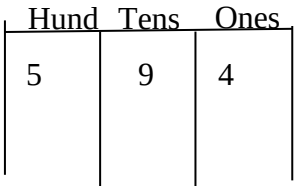
Strategy - Make a place value chart and mark the periods.



- Use the number in words to have students read each part of the number in the periods and record the number above the words: read the number in the period followed by the period names. (Chunk It)
- Then have students record in PVC to check themselves.

594

Five hundred ninety-four



How - Example: made place value chart to hundreds place

Guided Practice 2: Multiple Representation

1. Display the following problem.

Dale gave his son his stamp collection with 5,603 stamps in it. Which of these is NOT a correct way to represent the number of stamps?

A. 3 thousands + 26 hundreds + 3 ones

B. 4 thousands + 16 hundreds + 3 ones

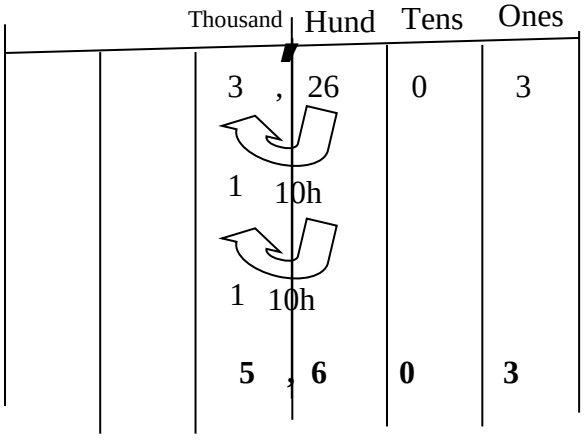
C. 5 thousands + 6 hundreds + 3 ones

D. 5 thousands + 6 tens + 3 ones

2. Begin the "**4-step problem solving process"** with students.

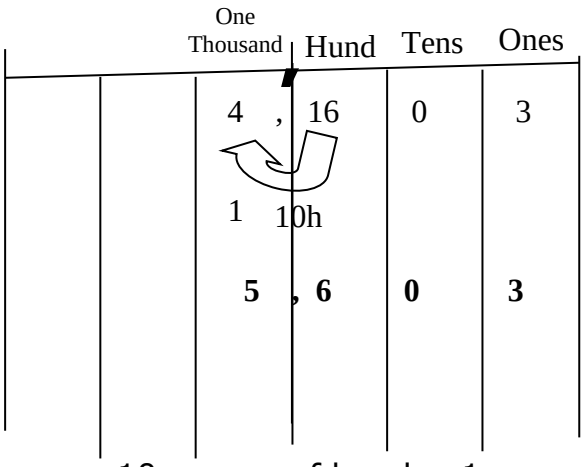
NOT correct representation	5,603 10 tens = 1 group of a hundred 10 hundreds = 1 group of a thousand

A.



10 groups of hund = 1 group of th
10 groups of hund = 1 group of th
That leaves 6 hund.
3 th + 1 th + 1 th = 5 th
5,603

B.



10 groups of hund = 1 group of th
That leaves 6 hund.
4 th + 1 th = 5 th
5,603

Have students do PVC's for answer choices C and D.

Guided Practice 1 and 2

1. **Normal lake level in Belton Lake is five hundred ninety-four feet. How is this number written in standard form?**

2. **Dale gave his son his stamp collection with 5,603 stamps in it. Which of these is NOT a correct way to represent the number of stamps?**

   E. 3 thousands + 26 hundreds + 3 ones

   F. 4 thousands + 16 hundreds + 3 ones

   G. 5 thousands + 6 hundreds + 3 ones

   H. 5 thousands + 6 tens + 3 ones

Resources: IMN Strips (6/page)

Look at the following:

349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning

Look at the following:

349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning

Look at the following:

349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning

Look at the following:

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Is this statement true or not true? Explain your reasoning

Look at the following:

349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning

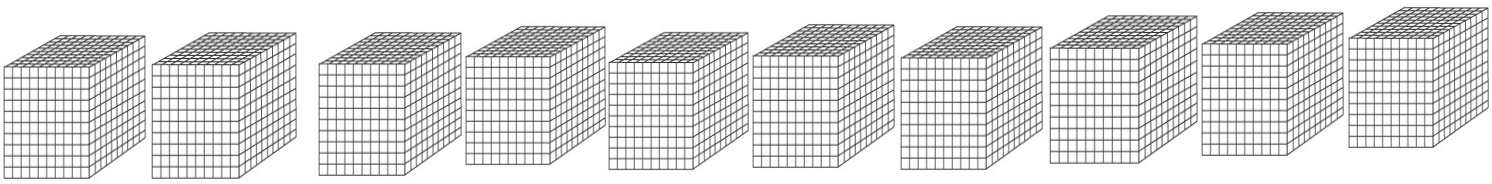
Look at the following:

349 = 2 groups of a hundred + 14 groups of ten + 9 ones

Is this statement true or not true? Explain your reasoning

Part III: Understanding Place Value with 5 Digit Numbers

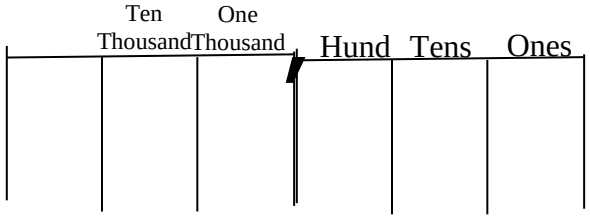
1. Journal idea for warm-up on left side of IMN (underneath what they did the day before)(IMN Strips in Teacher Note resources) : Explain why you think it's important to be able to read a number correctly. For example: 5,095 – Five thousand, ninety five (IMN strips found in teacher notes pg. 34)
2. Have students share their journal responses with a neighbor and then with the class.
3. Use guiding questions to review the anchor charts and the relationship between the place values of ones, tens, hundreds and thousands. Add any new student responses to Anchor Chart. Be sure students use the vocabulary "ten times" when sharing that it takes 10 ones to make 1 group of ten and 10 groups of ten to make a group of 1 hundred. Also, that we used the hundreds 10 times to equal a group of 1 thousand.
4. Experience Before Label: Have students use only the thousands (blocks) to see how many they will need to make a group of ten thousand. Some students may already recognize the pattern of ten, others may need to count by 1,000's to discover that they need 10 groups of a thousand to equal a group of 10 thousand. (Hint for students: They may need to work cooperatively with others in the class in order to have enough manipulatives.)
5. Have students either stack or line up the thousands to represent 10 thousand.



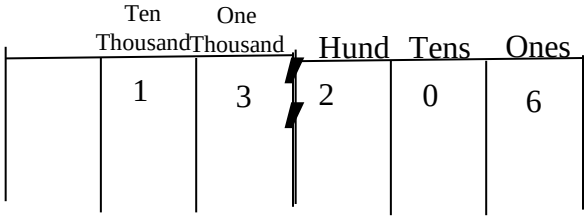
6. "So, how many times did we use a group of 1 thousand to equal 10 thousand?" (10 times)
7. Have students write 10 thousand = 1 group of ten thousand on the right side of their IMN.
8. Now, write (IMN strips found in Teacher Notes Pg. 29)

1 group of ten thousand = _____ groups of a thousand = _____ groups of a hundred = _____ groups of ten = _____ones

9. Have students work together to fill out the above. Share with class once finished.
10. "Now, let's look at our Place Value Chart. Since we've learned a new place value, where do you think we should label it on our Place Value Chart?" (to the left of the one thousand) "Why?" (because we used the thousands 10 times to equal ten thousand)



11. Let's put some digits in our Place Value Chart.



12. Have students share with their neighbor as many things as they can about what they see? Or notice?
13. Now, have students share with class and have them explain their thinking. Some possible responses could be:
    - The ones digit is the largest. Ask students, "Does that mean that the 6 has a larger value?" (No, because it's only 6 ones and that is smaller than any other the other place values) ***Encourage students to think farther with this response as this is true for the face value of the digits but the true value of these digits is 10,000 + 3,000+200+6 and 6 is greater than 0 but <u>not</u> greater than 200, the 3,000 or the 10,000)
    - The digit in the thousands place is larger than the digits in the tens, hundreds, and tens place
    - All of the digits are the same as before, but now we have a 1 in the ten thousands place.
    - 1 in the ten thousands place, 3 in the thousands place, 2 in the hundreds place, 0 in the tens place, 6 in the ones place (If

students respond with this, ask them to think about what values these represent.)

- 1 ten thousand, 3 thousands, 2 hundreds, 0 tens, and 6 ones (# of each thousand, hundred, tens and ones)
- 10,000 + 3,000 + 200 + 0 + 6 (expanded form to show the values of each digit) Ask students "Is it necessary for us to write the 0?" (No) "Why?" **You will have to guide students through this answer.(because the number 10,000, 3,000 and 200 both contain sets of tens. For example, how many groups of ten are in 200? 20. There are not any groups of tens that can't be grouped together to make hundreds or thousands, that's why we don't have to show our tens, because they are already grouped in 10,000, 3,000 and 200.)
- Thirteen thousand, two hundred six (word form) ****Remember to correct students to say "thirteen thousand, two hundred and six" because adding an **AND** anywhere in the middle will represent a decimal in later grades*****

14. Now, we want students to start discovering other ways to represent 13,206. Please note that there are multiple ways students can show this.
15. Challenge: Have students go back to their seats to work cooperatively with their table and create the wildest way to represent 13,206. Because the numbers are getting larger, students will need to use the patterns discovered to help them create other ways.
16. Let student know that we have already represented 13,206 with 1 ten thousand (10,000), 3 thousands (3,000) 2 hundreds (200), 0 tens (0), and 6 ones (6). Have them work with their table to come up with other ways to represent 13,206. Some examples could be (Encourage students to write the value of the base 10 blocks underneath the manipulatives):
    (Due to sizes of manipulative pictures we will be limited to providing examples in the expanded form of the manipulatives)

    1 ten-thousand + 1 thousand + 21 hundreds + 8 tens + 26 ones =13,206

17. Continue to have students work in table groups and give them 5 digit numbers. Students can record how to read the number in words on the Recording Sheet A provided (pg 27). After giving students time to create a way to represent the number, have each table group share and students can record each other's findings on Recording Sheet A.

Recording Sheet A (Con't)

5. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

_____ Ten Thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

---

6. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

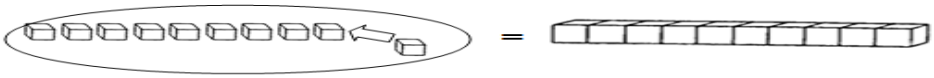
_____ Ten Thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

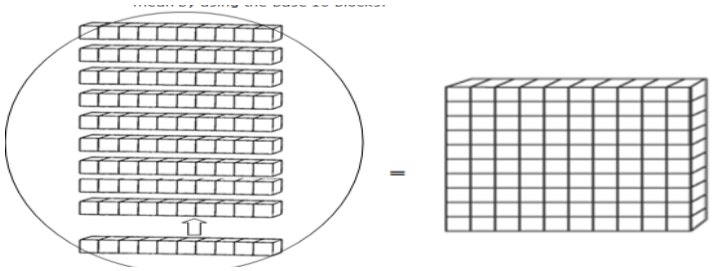
Place Value

Sample Anchor Chart

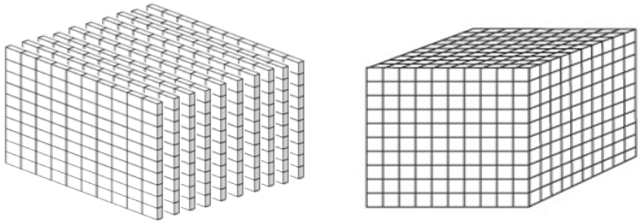
____ ones = 1 group of ten



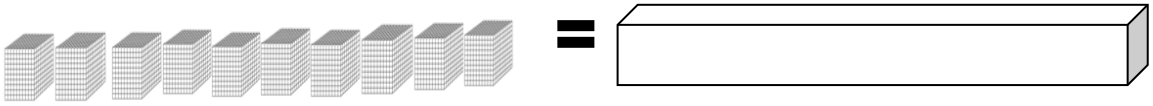
____ groups of ten = 1 group of a hundred



____ group of a hundred = 1 group of a thousand



____ group of a thousand = 1 group of ten thousand



1 group of a hundred = 10 groups of ten = 100 ones

1 group of a thousand = 10groups of a hundred = 100

groups of ten = 1000 ones

1 group of ten thousand = 10groups of a thousand = 100
groups of a hundred = 1,000 groups of ten = 10,000 ones

Resources: IMN Strips (10/page)

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

1 group of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____ groups of ten = ____ ones

Resources: IMN Strips (8/page)

Explain why you think it is important to be able to read a number correctly? For Example: 5,095 – five thousand, ninety-five

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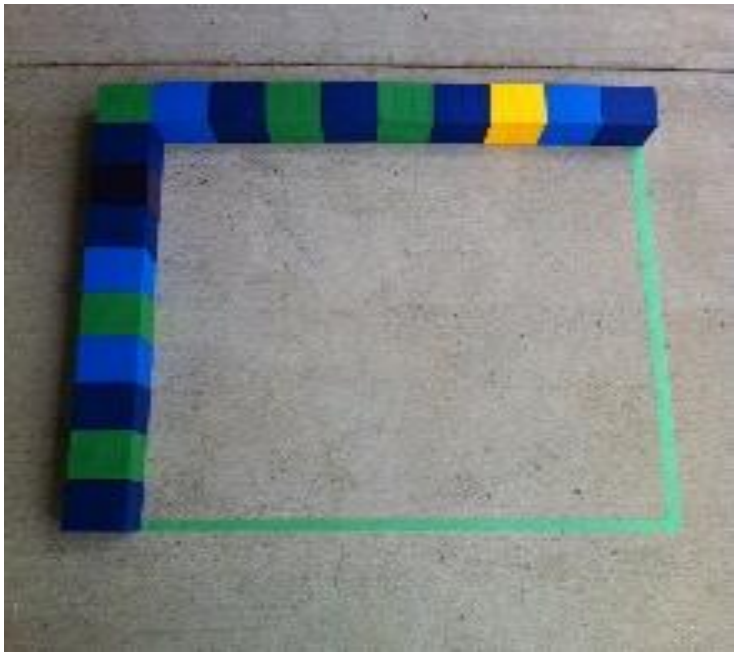
Explain why you think it is important to be able to read a number correctly? For Example: 5,095 – five thousand, ninety-five

Part IV: Understanding Place Value with 6 Digit Numbers (Note: we will only compose/decompose/read/write 100,000 due to TEK 3.2A)

***Additional materials: chalk / string / masking tape

1. Use guiding questions to review the anchor chart and the relationships between the place values of ones, tens, hundreds, thousands, and ten thousands. Add any new student responses to Anchor Chart. Be sure students use the vocabulary "ten times" when sharing that it takes 10 ones to make a group of ten and 10 groups of ten to make 1 group of a hundred. Also, that we used the hundreds 10 times to equal 1 thousand and 10 thousands to make 1 ten thousand.
2. Experience Before Label: Have students use the pattern of ten they have discovered to help them count by groups of ten thousands to determine the next place value (hundred thousands). They may work together as a class and set up ten thousand with base 10 blocks (as they did before) to help them. They may need to count by 10,000's to discover that they need 10 groups of ten thousand to equal 1 group of a hundred thousand.
   - **Example: Use 10 ten thousands on the floor and use tape / string to outline the groups as you move and count them.
   - **Example: Use 10 ten thousands outside on concrete or blacktop and use sidewalk chalk to outline the groups as you move and count them.



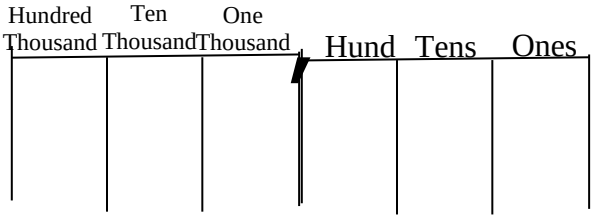
3. "So, how many times did we use 10 thousand to equal 1 hundred thousand?" (10 times)

4. Have students write 10 groups of ten thousand = 1 group of a hundred thousand on the right side of their IMN. Add to Anchor chart
5. Now, write (IMN strips available in Teacher Notes pg. 35)

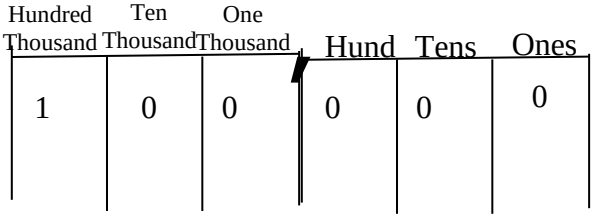
1 group of a hundred thousand = _____ groups of ten thousands = ____groups of a thousand = _____ groups of a hundred = _____ groups of ten = _____ones

6. Have students work together to fill out the above. Share with class once finished and write on anchor chart.

7. "Now, let's look at our Place Value Chart. Since we've learned a new place value, where do you think we should label it on our Place Value Chart?" (to the left of the ten thousand) "Why?" (because we used the ten thousands 10 times to equal one group of a hundred thousand)



8. "How do you think we would record 1 hundred thousand in our Place Value Chart?." (Put a 1 in the hundred thousand place) "What digit will we put in the other place values?" (0) Why? (because we traded in our ones to get tens and have none left, we traded in our tens to get hundreds and have none left, we traded in our hundreds to get thousands and have none left, we traded in our thousands to get ten thousands and have none left, we traded in our ten thousands to get hundred thousands and have none left. So all we have left is 1 hundred thousands)



9. Now, we want students to start discovering other ways to represent 100,000. Please note that there are multiple ways students can show this.
10. Dare students go back to their seats to work cooperatively with their table to represent 100,000 in the most creative way the world has ever seen. Because the numbers are getting larger, students will need to use the patterns discovered to help them create other ways.

11. Continue to have students work in table groups to decompose 100,000. Students can record how to read the number in words on the Recording Sheet A provided (pg 34). After giving students time to create a way to represent the number, have each table group share and students can record each other's findings on Recording Sheet A.

Recording Sheet A (Con't)

7. Number in Standard Form 100,000

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

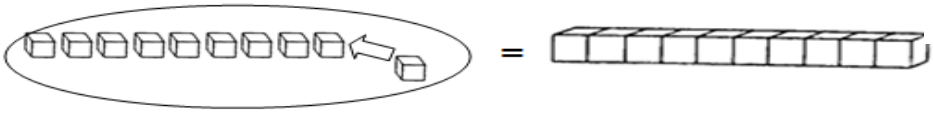
_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

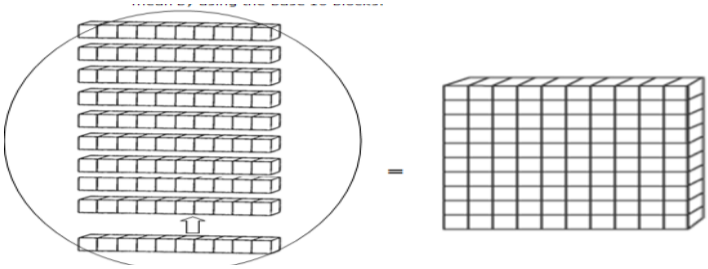
Place Value

Sample Anchor Chart

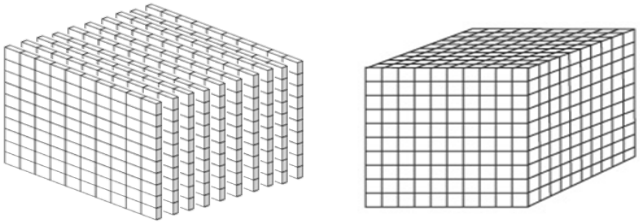
___ ones = 1 group of ten



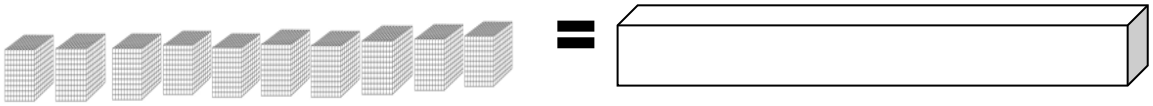
____ groups of ten = 1 group of a hundred



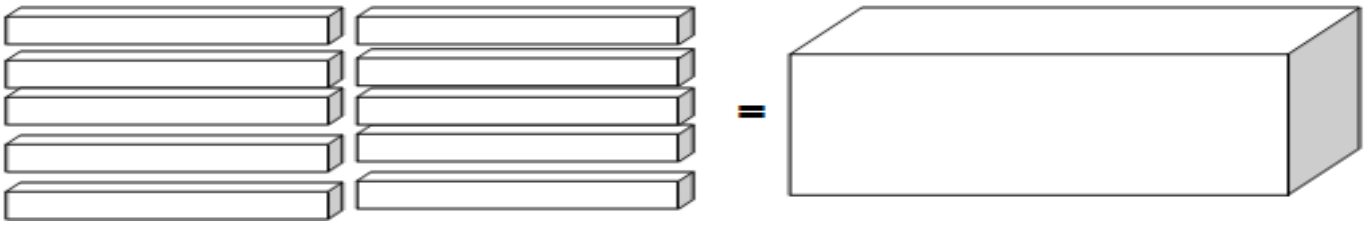
_____ groups of a hundred = 1 group of a thousand



_____ groups of a thousand = 1group of ten thousand



_____ groups of ten thousand = 1 group of a hundred thousand



ten times

Resources: IMN Strips (8/page)

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

1 group of a hundred thousand = ____groups of ten thousand = ____ groups of a thousand = ____ groups of a hundred = ____groups of ten = ____ ones

Recording Sheet A

1. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

OR

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

2. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

OR

_____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ =

Recording Sheet A (Con't)

3. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

OR

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

4. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

OR

_____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ =

Recording Sheet A (Con't)

5. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

____ Ten Thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

---

6. Number in Standard Form _____

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

____ Ten Thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

Recording Sheet A (Con't)

7. Number in Standard Form 100,000

Number in Word Form _____

Multiple Representations

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

OR

_____Ten thousand + _____ thousand + _____ hundreds + _____ tens + _____ ones =

_____ + _____ + _____ + _____ + _____ =

Guided Practice 3 and 4 using 5 digit Numbers

Guided Practice 3: Standard form to word form

2. Display the following word problem.

Joseph spent $39,437 on a new car. How do you read the amount of money Joseph spent?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea – Discuss with students how to summarize and condense the main idea of the question into a few important words. Abbreviations and symbols are encouraged.

Read money spent?

Details/Known - Students may re-copy the number (39,437) in the details section. Need to make PVC chart

Strategy - Make a place value chart and mark the periods.

	TT	Th	H	T	O
	3	9 ,	4	3	7

Thousand

Use the place value chart to have students read each part of the number in the periods: read the number in the period followed by the period names. **(Chunk It)**

Example: The first two numbers, 39, are read together to say "thirty-nine," take a breath at the comma to say the name "thousand." Have students record the words in the strategy quadrant. Then read the next three numbers together as "four hundred thirty seven" and have students record the words again. Now match the students' written words to the answer choices.

How - Example: made place value chart to "chunk" numbers by periods and record in words.

Guided Practice 4: Expanded form to Standard form

Display the following problem.

10,000 + 10,000 + 3,000 + 1,000 + 400 + 300 + 20 + 10 + 5 = 2 ten-thousands + 4 thousands + 7 hundreds + 3 tens + 5 ones. What are these numbers written in standard form?

Is the equation correct? Explain your answer.

Begin using the **"4-step problem solving process"** with students.

Main Idea: #'s in standard form
Equation correct? Explain answer

Details/Known:Group like values together

Strategy: Let's start with the expanded form with given values. Have students talk with neighbor to see if they can create another expanded form of the number by grouping like values.

20,000 + 4,000 + 700 + 30 + 5

Now, let's place this number in a place value chart to help determine the standard form. Next, add up each of the values.

	TT	Th	H	T	O
	2	0	0	0	0
		4	0	0	0
			7	0	0
				3	0
+					5
	2	4	7	3	5

Now, let's write what we know and solve the other side of the equation.

24,735 = 2 ten-thousands + 4 thousands + 7 hundreds + 3 tens + 5 ones
= 20,000 + 4,000 + 700 + 30 + 5

Does anything look familiar? Yes, this expanded form is the same as we found on the left side of the equation. So, the equation is correct because the values on each side are equal.

24,735 = 24,735

How: added like values
Added each set of values using a place value chart

Guided Practice 3 and 4

3. Joseph spent $39,437 on a new car. How do you read the amount of money Joseph spent?

4. 10,000 + 10,000 + 3,000 + 1,000 + 400 + 300 + 20 + 10 + 5 = 2 ten-thousands + 4 thousands + 7 hundreds + 3 tens + 5 ones. What are these numbers written in standard form?

Is the equation correct? Explain your answer.

Relationships in Base 10 System

TEKS: 3.1a - use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999.
3.2b – describe the mathematical relationship found in the base-10 place value system through the hundred thousands place

VOCABULARY: regrouping (trading), hundred-thousands, ten-thousands, thousands, hundreds, tens, ones, place value, expanded form, word form, standard form, digit, **ten times**.

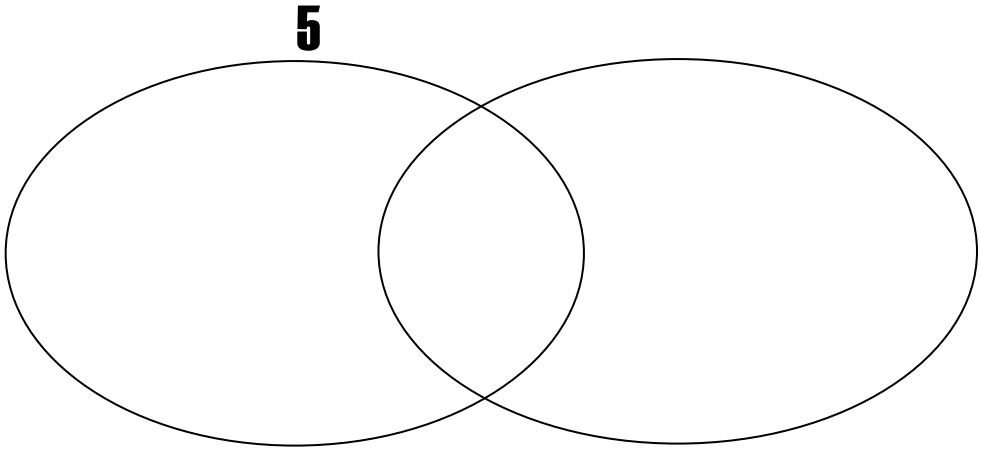
Background: 3rd grade relationships builds on the students' 2nd grade place value instruction. Relationships goes on to identify that a place value is **ten times** the place value to the right. The language used are the words **ten times** or 10 times (versus the symbols) to support student comprehension through the introduction of multiplication.

Materials: base 10 blocks per pair of students, Interactive Math Notebook (IMN), paper for anchor chart, copies of learning mats, Counters – M&M's, Skittles, Transparency chips, two sided counters, gram cubes, etc Copies of Record sheet A for each student, IMN relationship labels (these are small labels provided in resources of the teacher notes that students can glue into their IMN for more efficient note taking and reflection) IMN Journal strips (these are small strips provided in resources of the teacher notes that students can glue into their IMN for more efficient note taking and reflection)

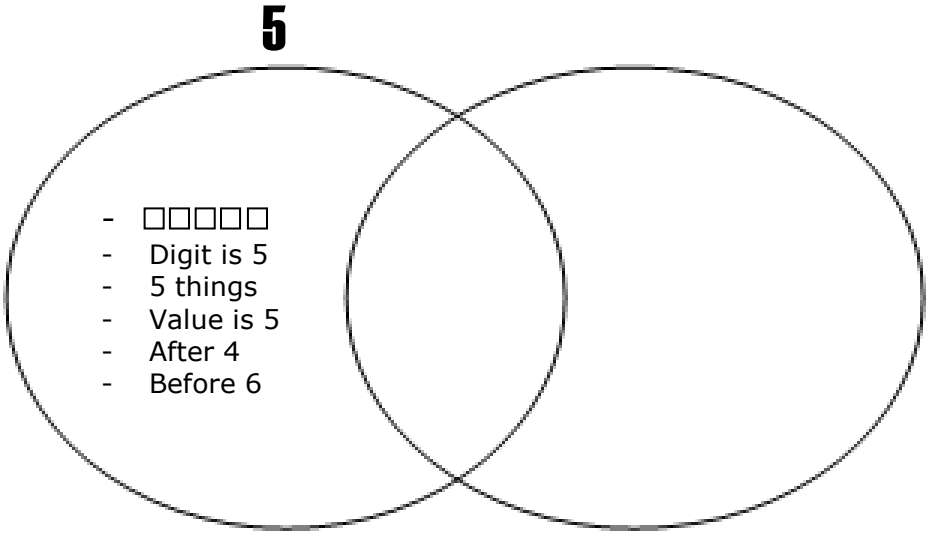
Part I: Relationships with adjacent Place Values

Introduction:

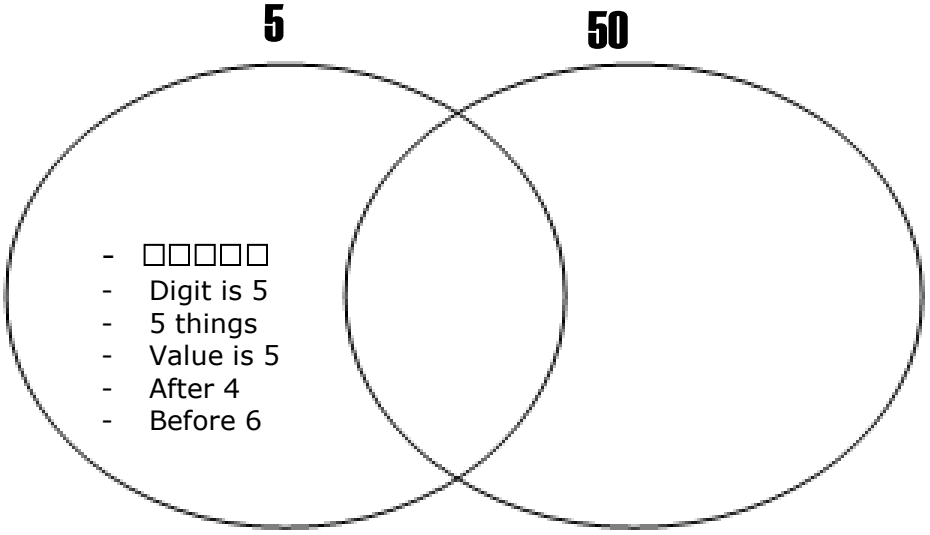
- Draw a Venn Diagram and Label one circle with a 5.



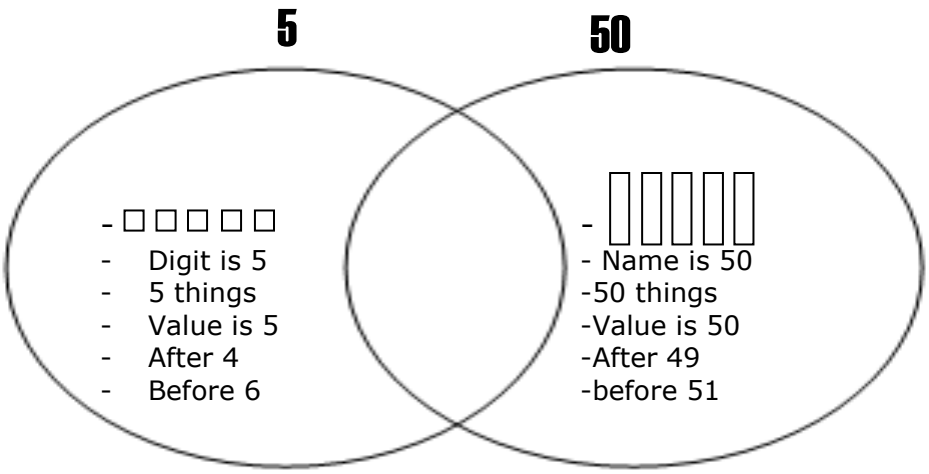
- Ask students , "What do you know?" (Name or digit is five, five things, after 4, before 6,value of 5, etc) Using words or pictures, record in the circle.



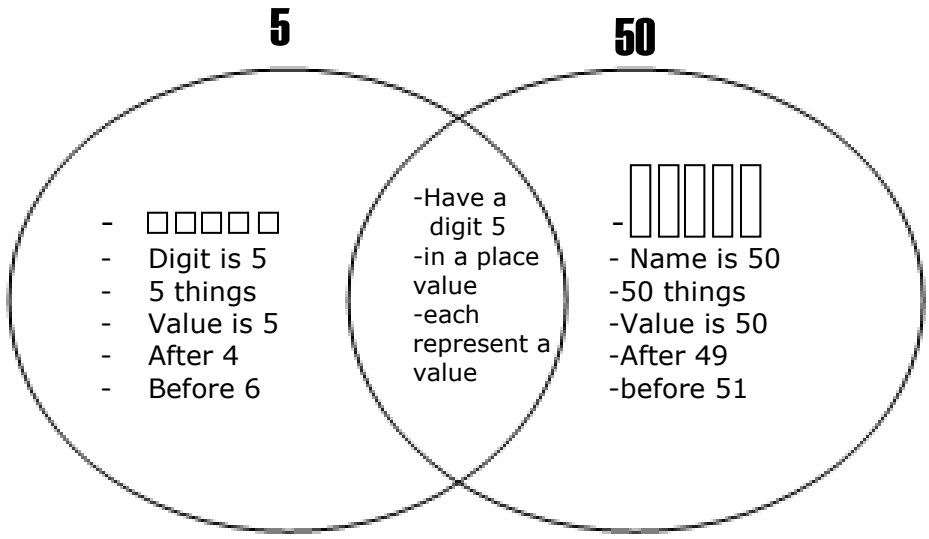
- Label the other circle with 50.



- Ask students, "What do you know?(Name is fifty, fifty things, after 49, before 51, 5 tens etc) Using words or pictures, record in the circle.



- Have students turn to their partner and discuss how these numbers are the same or similar (they each represent a value, they have a digit 5, in place values, etc.). Have students share their ideas and record in the overlapping area of the diagram.

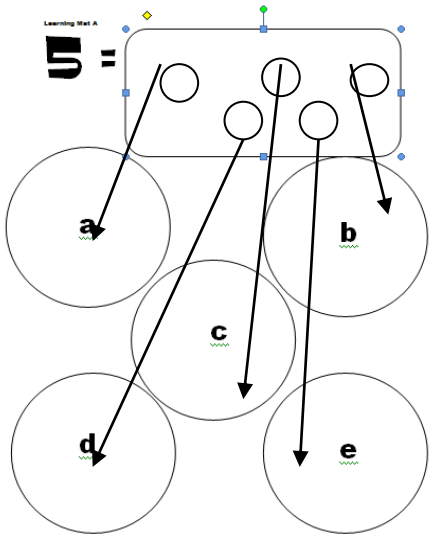


Lesson:

Experience before Label:

1. Say, "Now let's look a little bit closer at each of these numbers."

2. Give each table Learning Mat A and 5 counters to place in the rectangle. Ask the table to share out the counters evenly to the circles. Remind students that sharing evenly means that each circle will have the same number of counters.



3. Ask, "What do you notice?" (each group is one group of one counter, all the groups have the same number of counters) Discuss that each group is a group of 1 counter. Have students write in the rectangle: 1 group of 1 counter = 1. Keep mat with counters shared out evenly on the tables.

4. Give each table Learning Mat B and 50 counters to place in the rectangle. Ask the table to share out the counters evenly to the circles. Remind students that sharing evenly means that each circle will have the same number of counters.

5. Ask, "What do you notice now?" (each circle has 1 group of 10 counters, all the circles have the same number of counters) Discuss that each group is a group of 10 counters. Have students write in the rectangle: 1 group of 10 counters = 10. Keep mat with counters shared out evenly on the table.

6. As a table group, ask students to compare the counters in Group C on Learning Mat A with the counters in Group H on Learning Mat B. "How many times would you count the counters in Group C to get the same amount in Group H?" (**ten times**) Lead students to notice that the one counter in Group C occurs **ten times** in Group H and since H is bigger it is **ten times** greater.

7. Ask, "So we would say that 10 is ___ times (10) bigger or smaller (bigger) than 1". But what could we say about the number 1 then? We need a group of 1 _____ times (10) to equal _____(10)? Pass out Record Sheet A and Fill in row 1 on Record Sheet A (Pg 62 in Teacher notes)

8. Teacher demo (using ladybug/Elmo or on floor with students): Use Learning Mat C and place 500 counters in the rectangle. Work with students to share out the counters evenly to the circles and talk about counting out in groups of 10's or 100's so you don't have to count each unit individually.

9. Ask, "What do you notice now?" (each circle has 1 group of 100 counters, all the circles have the same number of counters) Discuss that each group is a group of 100 counters. Write in the rectangle: 1 group of 100 counters = 100. Keep mat with counters shared out evenly available for students to refer back to.

10. As a table group, ask students to compare the counters in Group H on Learning Mat B to the counters in Group M on Learning Mat C. "How many times would we have to count the group of counters in Group H to get the same amount of counters as in Group M?" Lead students to notice that the one group of 10 in Group H occurs **ten times** to get the 100 in Group M, and since Group M is bigger it is **ten times** bigger

11. Ask, "So we would say that 100 is ___ times (10) bigger or smaller (bigger) than 10". But what could we say about the number 10 then? We need a group of 10 _____ times (10) to equal _____ (100)? Fill in row 2 of Record Sheet A.

12. "Amazing! Now it's time for a challenge! Now we know we need 1 ten times to equal 10 (notice we are counting by 1's 1-2-3-4-5-6-7-8-9-10) What if we have 5's, how many times do we need to use 5 to equal 50? (Students may need to be reminded that we counted by 1's in the previous example, so what might they need to count by here? 5's)

5	10	15	20	25	30	35	40	25	50
1	2	3	4	5	6	7	8	9	10

We needed 5 **ten times** to get 50. We also know that 10 is _____ times (10) greater than 1. So if we have 50, how many times greater is 50 than 5? (10 times) Or 50 is _____ times (10) greater than 5. Fill in row 3 of Record Sheet A.

13. "For the next challenge! Now we know we need 10 ten times to equal 100 (notice we are counting by 10's 10-20-30-40-50-60-70-80-90-100) What if we have 50's, how many times do we need to use 50 to equal 500? (Students may need to be reminded that we counted by 10's in the previous example, so what might they need to count by here? 50's)

50	100	150	200	250	300	350	400	450	500
1	2	3	4	5	6	7	8	9	10

We needed 50 **ten times** to get 500. We also know that 100 is _____ times (10) greater than 10. So if we have 500, how many times greater is 500 than 50? (10 times) Or 500 is _____ times (10) greater than 50. Fill in row 4 of Record Sheet A.

14. "This is amazing. These numbers are connected or work together as a pattern, and this is called a Relationship"

15. Have students put the title "Relationships" in their Table of Contents in their IMN (Interactive Math Notebook). Have the students go to their next clean page and title the page on the right (teacher input) "Relationships". Students may now fill in row 5 of their Record sheet A and glue onto this page.

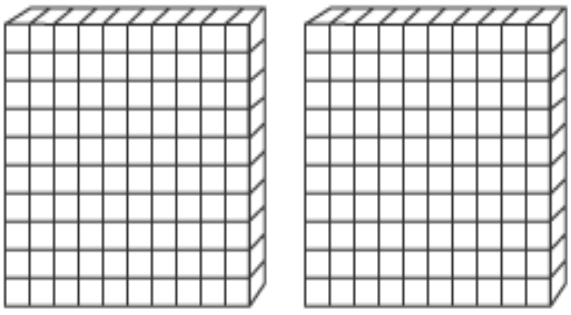
16. Have students return to Learning Mat A. "If each group on this mat holds one counter, which one of our base ten blocks could we use to represent this number with?" (Unit /ones) Have students replace counters with units.

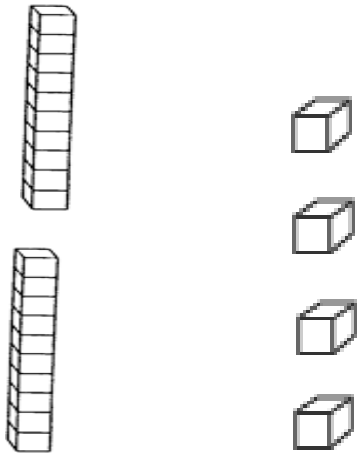
17. Now look at Learning Mat B. "If each group on this mat holds ten counters, what type of base ten blocks could we use to represent this number with?" (rods/tens) Have students replace counters with rods. Ask students," How many times bigger are the tens than the ones?" (**ten times**) as they replace the counters.

18. Ask, "What base ten block would we use to represent this number with on Learning Mat C?" (Flats/ hundreds) Have students replace counters with flats. Ask students, "How many times bigger are the hundreds than the tens?" (**ten times**) as they replace the counters.

19. "So what does this relationship mean when it comes to numbers that we use every day?" Let's turn these mats into a number we can use."

20. Have students pull the base ten blocks from the mats (give each table 5 hundreds as they do not have them from the teacher demo) and organize them to show their number.





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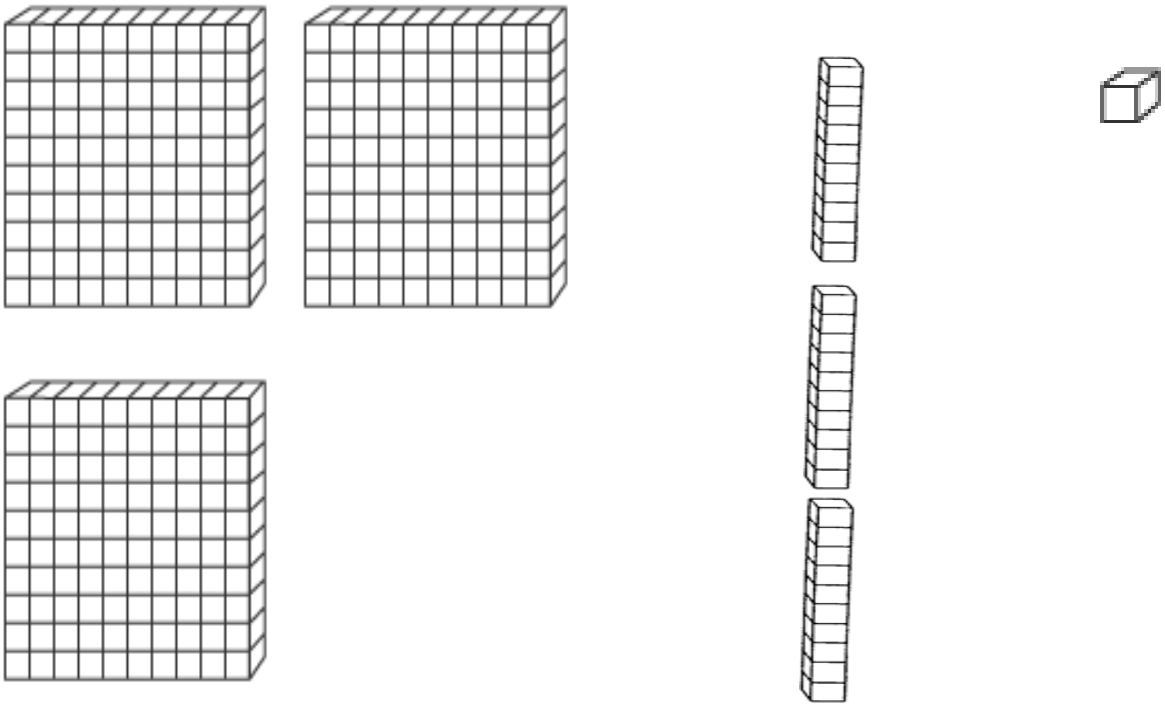


5 groups of a hundred + 5 groups of ten + 5 ones

500 + 50 + 5 = 555

21. Ask, "What number did we make?" (555) Have students write this number in expanded form on the right side of their journal under the title Relationships and Record Sheet A.

22. Write 500 + 50 + 5 on Anchor chart

23. Say," Let's look at the relationship between the ones and tens. Do you think the relationship will be the same or different from what we just did? (same) Why? (because it will always take ten of the ones to equal 1 group of 10) You will be guiding students towards making this generalization if they do not easily put it into words.

24. Have students talk with partner "What would I do to figure out how many 5's are in 50? (count by 5's) Let's count 5-10-15-20-25-30-35-40-45-50 We counted **ten times**. There are ten 5's in 50.

25. On anchor chart, draw an arrow from 5 to 50. Below the arrow write : 50 is **ten times** the value of 5 (See example of Anchor chart Pg 61)

26. Students draw arrow and write phrase under the expanded form in their IMN: 50 is 10 times the value of 5 (Provided as an IMN label in resources of teacher notes Pg. 63)

27. "Now that I know about 50, how do we figure out how many 50's are in 500? Discuss with partner (count by 50's) Let's practice that 50-100-150-200-250-300-350-400-450-500. We counted **ten times**. There are ten 50's in 500.

28. On anchor chart, draw an arrow from 50 to 500. Below the arrow write : 500 is **ten times** the value of 50

29. Students draw arrow and write phrase under the expanded form in their IMN: 500 is 10 times the value of 50 (IMN label)

30. Have students share with their partner what they notice. Use the left side of their IMN to draw pictures/write/explain what they see as they talk.

31. Share responses with class and add any information or insights to anchor chart.

32. What did we learn about Relationships? (It is how numbers are connected or the pattern that numbers follow). What would you describe as the relationship?" (a place value is **Ten times** the value on the right.)

33. Write relationship on the Anchor chart and have students write it on the right side of their IMN above what they have just completed.

Guided Practice 1- Relationships between tens and ones place value.

In the number 733, how many times bigger is the 3 in the tens place than the 3 in the ones place?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea: times bigger 3 in tens than 3 in ones
Details/Known: 733
Strategy: Place value chart

1. "Let's use what we know, what did you use in 2nd grade that helped you organize the values of your numbers?" (A place value chart)

2. Draw place value chart and put the number in it.

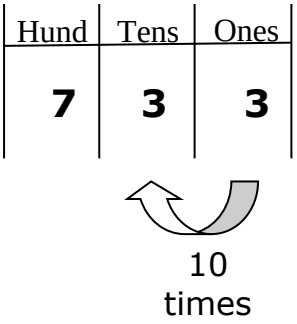
Hund	Tens	Ones
7	**3**	**3**

3. "What do we know about the relationship between the values of the digits? (a place value is **ten times** the value on the right)

4. "So the 3 in the tens place is _____ times (10) the number on the right. What is that number? (3 ones)

5. "We just figured out that the 3 in the tens must be how many times bigger than the 3 on the right, the 3 in the ones" (**ten times**)

6. Draw an arrow from the ones to the tens and label it 10 times bigger



How: drew place value chart, relationship is 10 times the value on the right

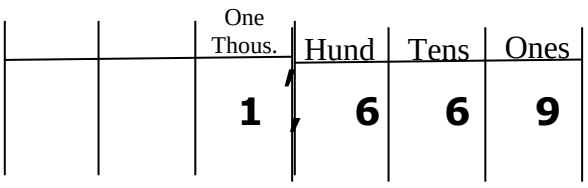
Guided Practice 2- Relationships between the tens and hundreds place value.

In the number 1,669, How many times bigger is the 6 in the hundreds place than the 6 in the tens place?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea: times bigger 6 in hundreds than 6 in tens
Details/Known: 1,669
Strategy: Place value chart

1. Draw place value chart and put the number in it

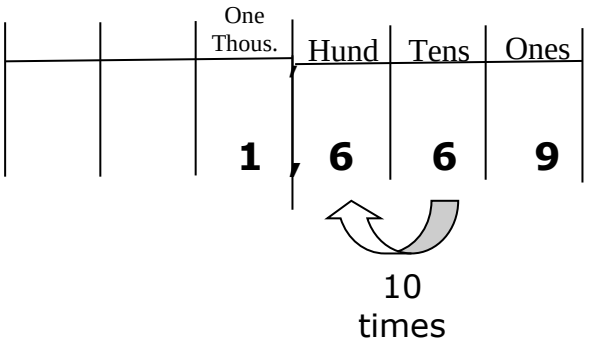


2. "What do we know about the relationship between the values of the digits? (a place value is **ten times** the value on the right)

3. "So the 6 in the hundreds place is _____ times(10) the number on the right, what is that number? (6 ones)

4. "We just figured out that the 6 in the hundreds must be how many times bigger than the 6 on the right, the 6 in the tens" (**ten times**)

5. Draw an arrow from the ones to the tens and label it 10 times bigger



How: drew place value chart, relationship is 10 times the value on the right

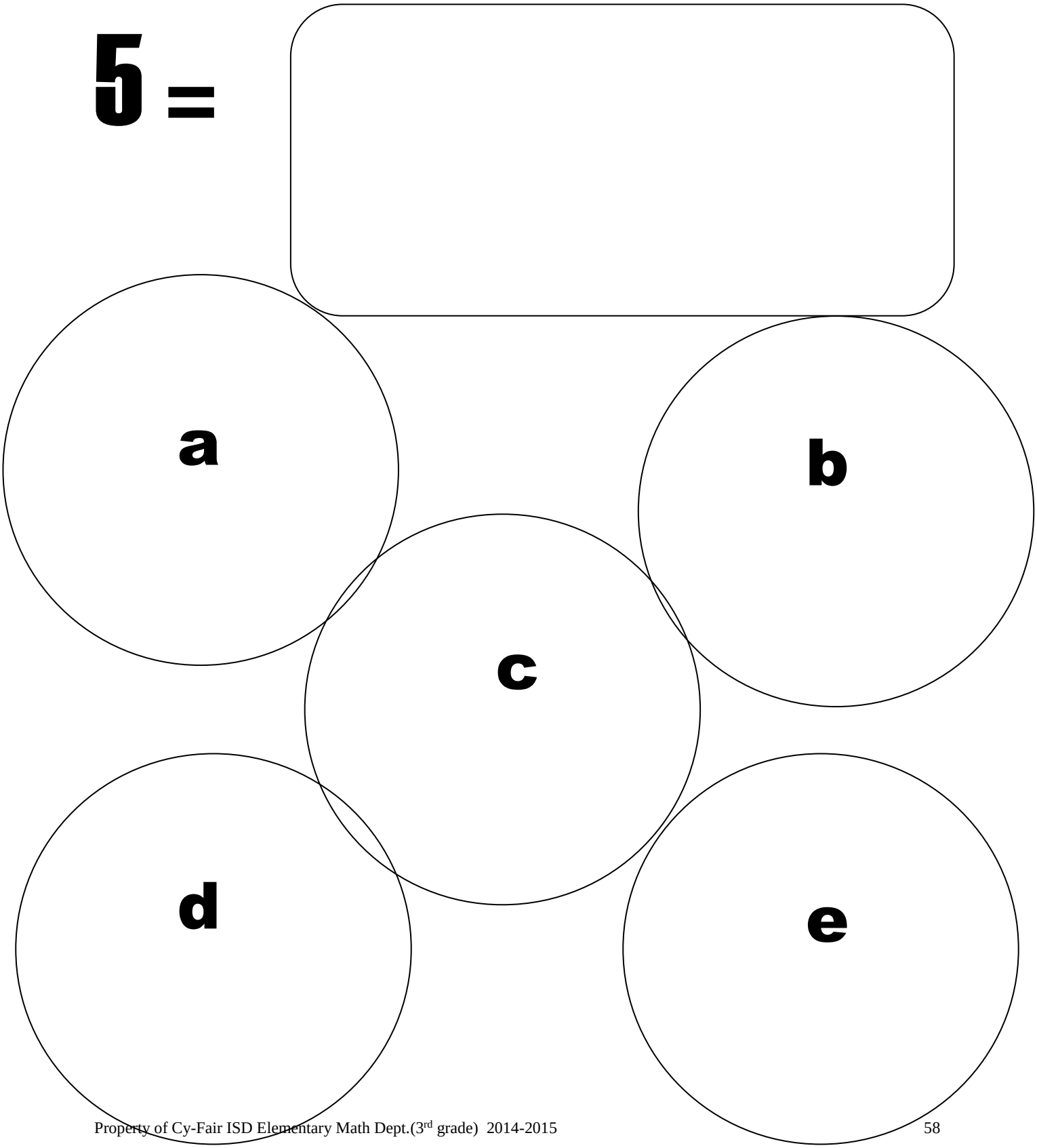
Guided Practice

1. **In the number 733, how many times bigger is the 3 in the tens place than the 3 in the ones place?**

2. **In the number 1,669, how many times bigger is the 6 in the hundreds place than the 6 in the tens place?**

Learning Mat A

5 =



Learning Mat B

50=

f

g

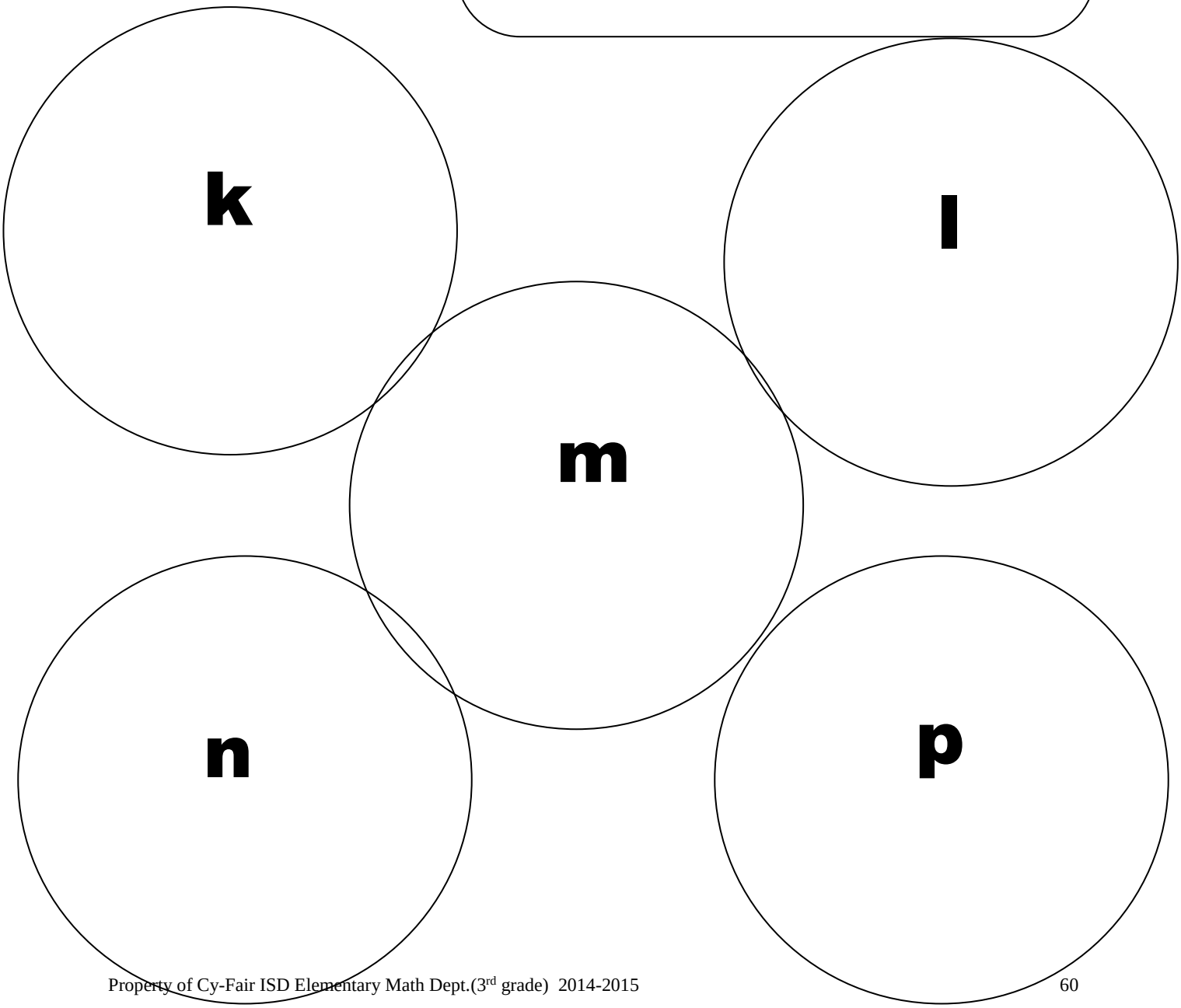
h

i

j

Learning Mat C

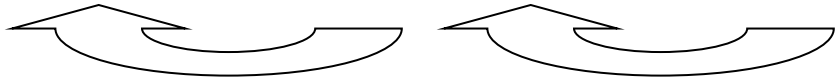
500=



Sample Anchor Chart

Relationships

500 + 50 + 5



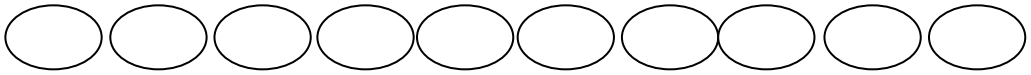
500 is ten times the value of 50 (Ten 50's in 500)	50 is ten times the value of 5 (Ten 5's in 50)

The Relationship:

A place value is Ten Times the value on the right.

Record Sheet A

Number Investigation

1.	10 is _____ times bigger / smaller than 1. or I need a group of 1 _____ times to equal 10.
2.	100 is _____ times bigger / smaller than 10. or I need a group of 10 _____ times to equal 100.
3.	 1 2 3 4 5 6 7 8 9 10 50 is _____ times greater / less than 5 or I need a group of 5 _____ times to equal 50.
4.	 1 2 3 4 5 6 7 8 9 10 500 is _____ times greater / less than 50 or I need a group of 50 _____ times to equal 500
5.	What do I notice / understand?

Resources: IMN Labels

_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____
_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____
_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	**ten times the value of** _____
_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____
_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____	_____ **is ten times the value of** _____

Part I (continued): Relationships with adjacent Place Values

1. Journal idea as warm-up on left side of IMN (underneath notes from previous lesson)(Provided as an IMN strip in Teacher Note Resources Pg. 71)

   Use the following number to make a hypothesis.

   5,555

   How many 500's could you count to get to 5,000? Explain your hypothesis.

2. Review Anchor chart from Part I of the lesson. Add any additional student insights to the anchor chart.

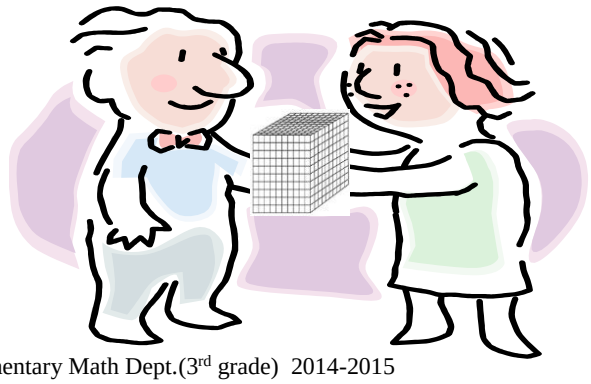
3. Ask, "Does the relationship change as we get to bigger numbers?"(a relationship does not change, it stays the same)

4. Ask student to share some hypothesis from their warm up. Students may add to or modify their hypothesis in their IMN as the class discusses and they get better comprehension and understanding.

5. Write 5,555 on the board. We are going to see how many 500's it takes to make 5, 000.

6. Have a student stand with 5 flats in front of classroom and tell the class this person represents 1 group of 500. Have another student hold 5 flats and come to the front and tell the class this person represents a second group of 500.

7. Ask: "If we have 5 hundreds and 5 hundreds more, how much do we have? (one thousand) What can we use to represent a thousand? (trade in for a thousand cube). Trade the 10 flats for one cube and have both students hold the cube between them.



8. Continue this pattern with the students until 5,000 is represented (ten students).

9. Ask: "How many groups of 500 did we need to make 5,000? (10) So, we need a group of 500 how many times to equal 5,000? (Ten times) Which means we also know 5,000 is ____ times greater than 500? (10)."

10. On Anchor chart, add a 5,000 in the correct place value. Draw an arrow from 500 to 5,000 and write underneath the arrow: 5,000 is ten times the value of 500.

5,000 is ten times the value of 500
(Ten 500's in 500)

11. Add this to your anchor chart and have students add this to their notes from Lesson I. (Use IMN labels in resources from Lesson 1 Pg 63)

12. Have students look back at their Journal entry for the day and see if their hypothesis was correct. Take a few minutes for students to add onto journal entry, now that they have a better understanding.

13. Now write 55,555 and ask student to discuss at their table how many groups of 5,000 would make up 50,000 (ten times) Ask: "How many groups of 5,000 did we need to make 50,000? (10) So, we needed 5,000 how many times to equal 50,000? (Ten times) Which means we also know 50,000 is ____ times greater than 5,000? (10)."

14. Add this to anchor chart and have students add to their IMN's using the same IMN labels

50,000 + 5,000 + 500 + 50 + 5

50,000 is ten times the value of 5,000
(Ten 5,000's in 50,000)

15. Ask, "Is our relationship still the same? (yes) Has our relationship changed any? (no) What could we then say about relationships?"(relationships stay the same and place value is always **ten times** the value on the right)

<u>Part II: Relationships with non-adjacent Place Values with the same digit</u>

16. But what happens when my numbers are not right next to each other? Does the relationship all of the sudden change? (No, relationships stay the same)

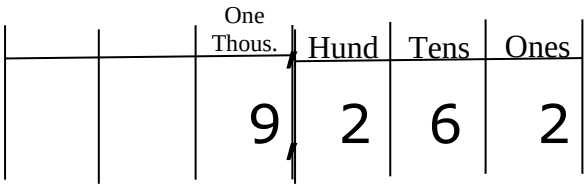
17. Write 9,262 on the board. Students will also write the number on right side of IMN under previous work.

18. Ask: "How many times bigger is the 2 in the hundreds than the 2 in the ones? Can we figure it out since they are not next to each other?"

19. Let's think about what we know! The relationship says what? (a place value is **ten times** the value on the right)

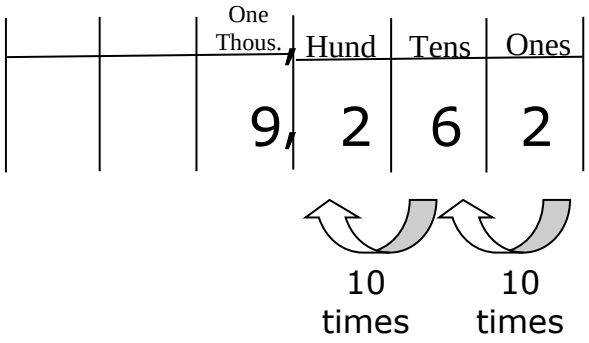
9,262

20. Let's use our Place value charts to help us organize our numbers



21. Say, "Let's remember we are trying to find out how many times bigger the value is in the hundreds place than the ones place. We are trying to find how many groups of 2 ones are in 2 hundreds. It is not finding the difference! We have to remember the relationship between the place values!"

22. Go back to the place value chart. "We are trying to find out how many times ones are used to make a hundred. So let's start in the smaller place value and work up to the larger place value." Ask, " How many ones are in the tens?" (10) Draw the arrow and label it 10 times. Ask, " How many 10's are 100?" (10) Draw the arrow and label it ten times.



23. "If we have ten times here (point to the first arrow) and ten times here (point to the second arrow), then we have 10 tens. How much is 10 tens? (100) So, if it is 100 times between the ones place and the hundreds place, then how many times greater is the 2 in the hundreds than the 2 in the ones? (100 times)

24. Write under the problem 10 groups of 10 = 100

25. This means we have 100 groups of 2 to make 200

Guided Practice 3- Relationships across two place values.

In the number 4,845, how many times bigger is the 4 in the thousands place than the 4 in the tens place?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea: times bigger 4 in thousands than 4 in tens
Details/Known: 4,845
Strategy: Place value chart

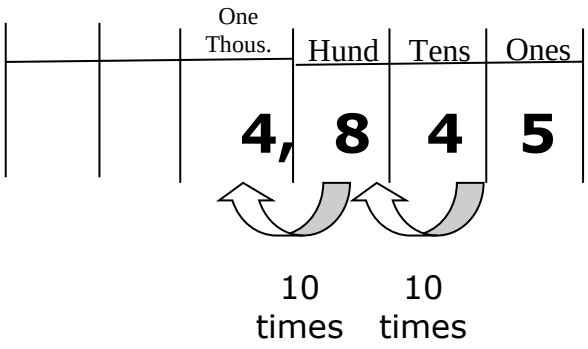
1. "Let's use what we know, what did you use in 2nd grade that helped you organize the values of your numbers?" (A place value chart)

2. Draw place value chart and put the number in it.

		One Thous.	Hund	Tens	Ones
		4 ,	8	4	5

3. "Let's remember we are trying to find out how many times bigger the value is in the thousands place than in the tens. We are trying to find how many groups of 4 tens are in 4 thousands. It is not finding the difference! We have to remember the relationship between the place values!"

4. Go back to the place value chart. "We are trying to find out how many times tens are used to make a thousand. So let's start in the smaller place value and work up to the larger place value."Ask," How many tens are in a hundred?" (10) Draw the arrow and label it 10 times. Ask, " How many 100's are 1,000?" (10) Draw the arrow and label it ten times.



5. "So if we have ten times here (point to the first arrow) and ten times here (point to the second arrow), then we have 10 tens. How much is 10 tens? (100) So if it is 100 times between the tens place and the thousands place, then how many times greater is the 4 in the thousands than the 4 in the tens? (100 times)

6. This means we have 100 groups of 40 in 4,000.

How: drew place value chart, relationship is 10 times the value on the right and 10 times the value on the right again to make 10 tens or 100 times

Guided Practice 4- Relationships across three place values.

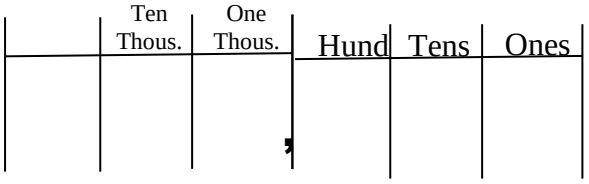
How many times larger is the ten thousands place than the tens place?

Begin the **"Four-Step Problem Solving"** process with students.

Main Idea: times bigger ten-thousands than tens
Details/Known: ten thousands and tens
Strategy: Place value chart

1. "Let's use what we know, what did you use in 2nd grade that helped you organize the values of your numbers?" (A place value chart)

2. Draw place value chart

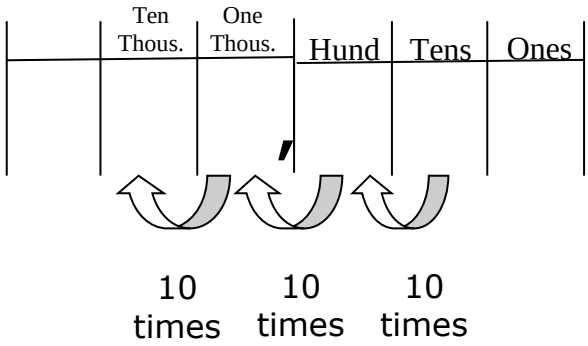


7. "Did the problem give us any numbers to fill in the place value chart? (no) So we are just going to have to use the relationship within the chart which says what? (**ten times** the value on the right)

8. ""Let's remember we are trying to find out how many times bigger the value is. We are trying to find how many groups often are in ten thousands. It is not finding the difference! We have to remember the relationship between the place values!"

9. Go back to the place value chart. "We are trying to find out how many times tens are used to make ten thousand. So let's start in the smaller place value and work up to the larger place value."Ask, " How many tens are in a hundred?" (10) Draw the arrow and label it 10 times. Ask," How many 100's are 1,000?" (10) Draw the arrow and label it ten times. Ask" How many 1,000's are 10,000?" (10) Draw the arrow and label it ten times.

10.



11. "So if we have ten times here (point to the first arrow) and ten times here (point to the second arrow), then we have 10 tens. How much is 10 tens? (100) It is 100 times between the tens place and the thousands place, but we still have 10 times left with the third arrow to get to the ten thousands place. So if this is 100 times (point to the first 2 arrows) and we have to do it 10 times more (point to the third arrows) How much is 100 ten times(demonstrate counting by 100's ten times = 1,000)

12. "We just figured out how many times larger the ten thousands place is than the tens place – 1,000 times!"

13. This means there are 1,000 groups of 10 in 10,000

How: drew place value chart, relationship is 10 times the value on the right and 10 times the value on the right again to make 100 times. Then took it 10 times more to get 1,000 times larger

Resources: IMN Strips

Use the following number to make a hypothesis. **5,555** How many 500's could you count to get to 5,000? Explain your hypothesis.	Use the following number to make a hypothesis. **5,555** How many 500's could you count to get to 5,000? Explain your hypothesis.
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Guided Practice

3. **In the number 4,845, how many times bigger is the 4 in the thousands place than the 4 in the tens place?**

4. **How many times larger is the ten thousands place than the tens place?**

Rounding Through Ten Thousands on a Number Line

TEKS: 3.2c: Represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers.

Vocabulary: round, about, closer to, nearly, midpoint, multiples, more than, less than, larger, smaller

Concrete Materials: 100's chart cut into strips and taped together to make a number line (The teacher should make a number line for each table using the 100's chart. Teacher will also color or circle all multiples of ten with a highlighter on the 100's chart), number line handouts, crayons, and one number line made from a 1,000 chart.

Teacher Background: Number lines develop a sense of the relative magnitude of numbers by providing a visual image of how much greater or less a number is than another. Number lines are infinite, flexible, and can be subdivided into parts of any size.

Part 1: Rounding numbers to the nearest 10

1. Start by using the Smartboard 100's chart activity.

2. Ask students to start counting by groups of 10.

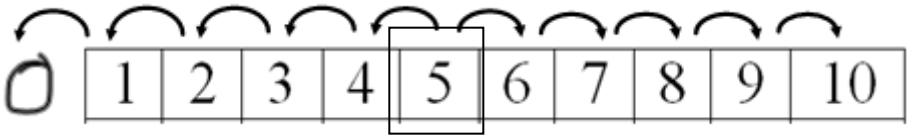
3. Circle the numbers on the 100's chart as students count. (10, 20, 30…)

4. "What do you notice when counting by 10's?" (the numbers are in the same column, the digit in the ones place in each number is 0, the digit in the tens place increases by 1 each time) "Why is the digit in the tens place increasing by 1 each time?" (we are adding groups of 10 each time)

5. "Now, let's find the midpoint between 2 multiples of ten. What do you think midpoint means?" (the number in middle/between)

6. "So, what is the midpoint between 0 and 10?" (The midpoint or number in the middle is 5) "How do you know this is the midpoint?" (because 10 ones make a group of ten, and half of 10 is 5, and we have 5 groups of one from 5 to 0 and 5 groups of one from 5 to 10.)

7. Using the SB marker, start at 5 and move back 5 places to 0. Then, start at 5 and move forward 5 places to 10. Place a box around the number 5.



8. Now show students the number line made from the 100's chart along with the 100's chart on the SB. "How is this number line similar to the 100's chart?" (numbers 0-100, number are in consecutive order) "How are they different?" (the number line is in a straight row."

9. "What is the midpoint between 10 and 20?" Have students use the previous strategy to find the midpoint. "There are 10 groups of one between 10 and 20, and half of 10 is 5. The midpoint or number in the middle is 15, because we have 5 groups of one from 15 to 10 and 5 groups of one from 15 to 20.) Continue this process all the way to 100, boxing in each midpoint.

10. "What did you notice about all of the numbers between the multiples of ten?"(Students may say they had a 5 in the ones place---help them also clearly understand that they were all in the middle of two groups of ten.) Go back to the hundreds chart to verify this.

11. "Today, we will be using number lines to round numbers to the nearest group of tens and group of hundreds." Pass number lines out to each table.

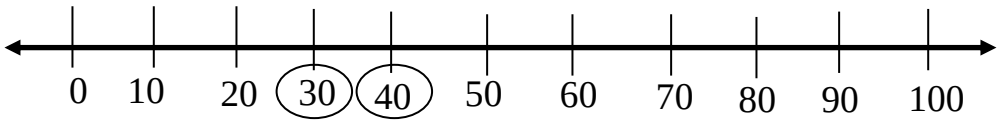
Guided Practice 1: **Rounding a 2-digit number to the nearest 10**

Mrs. White won 37 books at the book fair. She is going to use them as rewards for her students. Is 37 closer to 30 or 40 on the number line? Why?

Begin the **"Four-Step Problem Solving"** process with students.

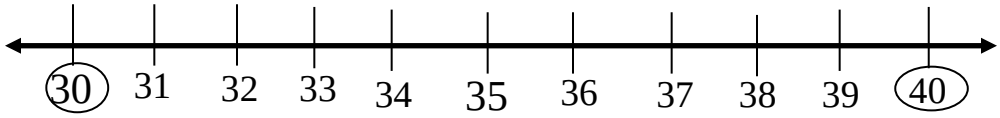
Main Idea: 37 closer to 30 or 40?
Details/Known: 37 books
Strategy: # line

1. "Let's use our paper number lines. Which two groups of ten is 37 between on the number line? Which group of ten is immediately before 37?" (30) "Which group of ten is immediately after 37?" (40)

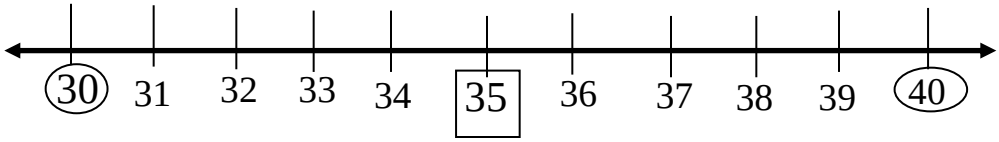


2. "Now that we have located the two groups of ten we need, we will continue to round by "zooming in" on the numbers between 30 and 40. Let's make a number line that starts with 30." Students should use the blank number line page provided.

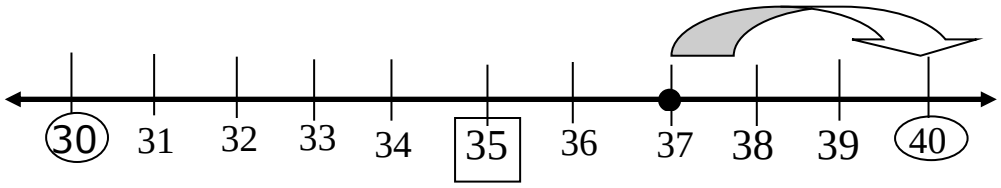
3. Ask students, "How many ones make a group of ten?" (10 ones) "So, how many ones will we need to get from 30 to 40 on the number line?" (10) "Notice we have 10 even spaces on our number line. Now, let's count by multiples of 1 starting with the number 30, and fill in the numbers on our number line." (31, 32, 33…40) "Let's circle 30 and 40, our 2 tens."



4. "What is the midpoint between 30 and 40?" (35) "Why?" (because it takes 10 ones to make a group of 10, and half of 10 is 5, and we have 5 groups of one from 35 to 30 and 5 groups of one from 35 to 40) "Let's put a small box around 35, our midpoint."



5. "Now, let's place a dot on the number 37 on the number line."



6. "Which group of 10 will 37 round to?" (40) Why? (because 37 is closer to 40 than 30)"Why does 37 not round to 30?" (because 30 is farther away from 37 than 40)

How/Why: made a # line, rounded up to 40, because 37 is closer to 40 than 30.

Guided Practice 2: **Rounding a 3-digit number to the nearest 10**

This strategy will be used to round 3, 4, and 5-digit numbers to the nearest 10.

Isabella has 281 quarters in her piggy bank. If she rounds to the nearest ten, about how many quarters does Isabella have?

Begin the **"Four-Step Problem Solving"** process with the students.

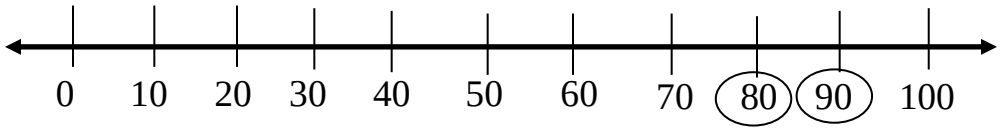
Main Idea: about # quarters to nearest ten?
Details/Known: 281 quarters
Strategy: # line

1. "Let's decide which digits in the number 281 we should use to round to the nearest group of 10." (81) "Why?" (Because the 8 is in the 10's place and we are rounding to the nearest group of 10.) "Why is the 1 important?" (It will help us determine the nearest group of ten.)

2. "Do you notice a digit in 281 that may not help us round to the nearest group of 10?" (2) "Why?" (Because it's in the hundreds place and has a value greater than the tens.)

3. "Ok, let's put a box around the number 81, so we don't get confused about which place we are rounding to." (281)

4. "Let's use our paper number lines. Which two groups of ten is 81 between on the number line? Which group of ten is immediately before 81?" (80) "Which group of ten must is immediately after 81?" (90)

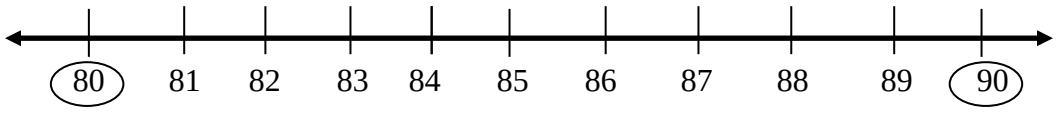


5. "Now that we have located the two groups of ten we need, we will continue to round by "zooming in" on the numbers between 80 and 90. Let's make a number line that starts with 80." Students should use the blank number line page provided.

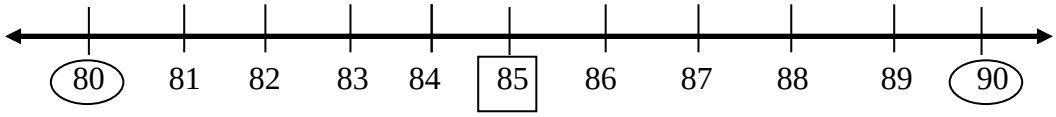
6. Ask students, "How many ones make a group of ten?" (10 ones) "So, how many ones do we need to get from 80 to 90 on the number line?" (10)

"Notice we have 10 even spaces on our number line. Now, let's count by multiples of 1 starting with the number 80, and fill in the numbers on our number line. "(81, 82, 83…90)

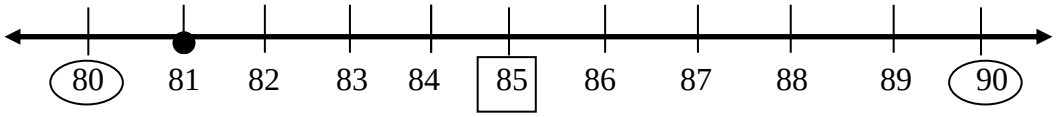
"Let's circle 80 and 90, our 2 tens."



7. "What is the midpoint between 80 and 90?" (85) "Why?" (because it takes 10 ones to make a group of 10, and half of 10 is 5, and we have 5 groups of one from 85 to 80 and 5 groups of one from 85 to 90.) "Let's put a small box around 85, our midpoint."



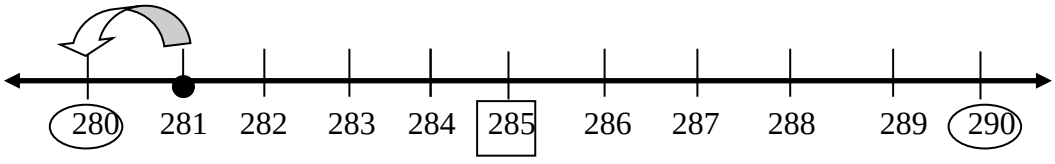
8. "Now, let's place a dot on the number 81 on the number line. Why are we doing that?" (Because it is the number we are rounding to the nearest group of 10)



9. "What group of ten does 81 round to?" (80) Why? (Because it's closer to 80 than 90)

10. "Now that we have located the nearest group of ten to 81, it's time to think about our original number. What number are we rounding to the nearest 10?" (281)

11. "How can we show 81 as 281 on our number line?" (We can place a 2 in the hundreds place on our number line) "Let's place a 2 in the hundreds place for all of the numbers on our number line"



12. "So, what group of 10 does 281 round to?" (280) "Why?" (Because 281 is closer to 280 than 290)

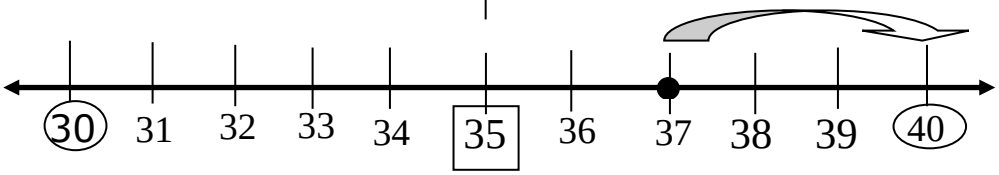
How/Why: made a # line, rounded down because 281 is closer to 280 than 290.

Rounding to the Nearest Ten

Guided Practice 1

Mrs. White won 37 books at the book fair. She is going to use them as rewards for her students. Is 37 closer to 30 or 40 on the number line? Why?

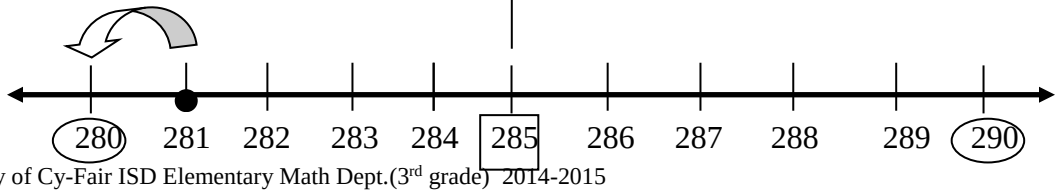
37 closer to 30 or 40?	37 books
# line	• made # line • rounded up • 37 is closer to 40 • 37 is farther away from 30



Guided Practice 2

Isabella has 281 quarters in her piggy bank. If she rounds to the nearest ten, about how many quarters does Isabella have?

About # quarters to nearest 10?	About = ROUND 281 quarters
# line	• made # line • rounded down • 281 is closer to 280 • 281 is farther away from 290



Rounding to the Nearest Ten

Guided Practice 1

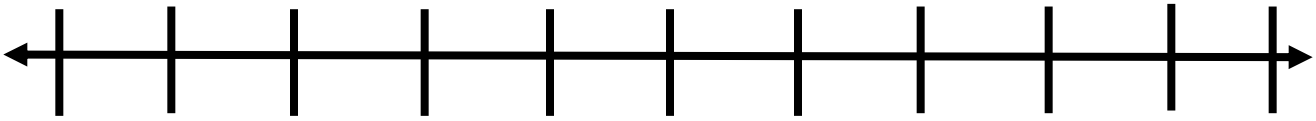
Mrs. White won 37 books at the book fair. She is going to use them as rewards for her students. Is 37 closer to 30 or 40 on the number line? Why?

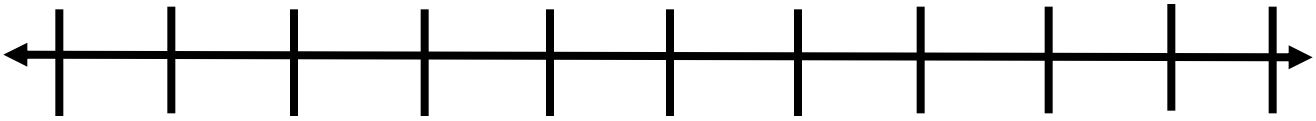
Guided Practice 2

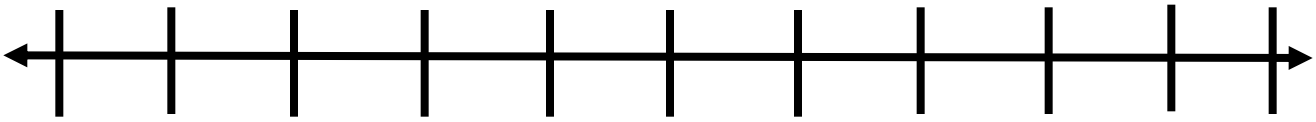
Isabella has 281 quarters in her piggy bank. If she rounds to the nearest ten, about how many quarters does Isabella have?

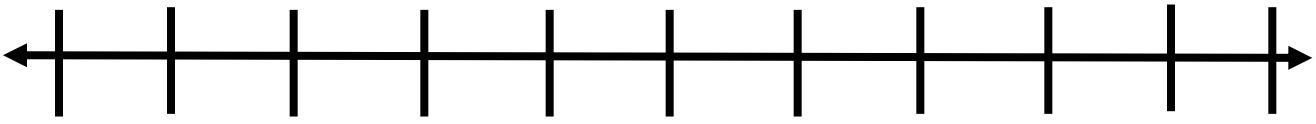
Hundreds Chart

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	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100









<u>Part II:</u> Rounding numbers to the nearest 100

1. Start by using a 1,000's chart on the Smartboard.

2. Ask students to start counting by groups of 100.

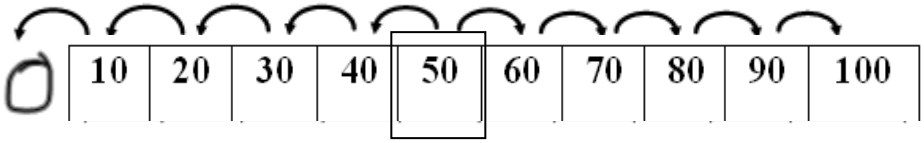
3. Circle the numbers on the 1,000's chart as students count. (100, 200, 300…)

4. "What do you notice when counting by multiples of 100?" (the numbers are in the same column, the digit in the ones place and tens place in each number is 0, the digit in the hundreds place increases by 1 each time) "Why is the digit in the hundreds place increasing by 1 each time?" (we are adding groups of 100 each time)

5. "Now, let's find the midpoint between 2 multiples of 100. What is a midpoint?" (the number in middle/between)

6. "So, what is the midpoint between 0 and 100?" (50) "Why?" (because it takes 10 groups of ten to make 100, and half of 100 is 50, and we have 5 groups of 10 from 0 to 50 and 5 groups of 10 from 50 to 100) "Let's put a small box around 50, our midpoint."

7. Using the SB marker, start at 50 and move back 5 places to 0 then start at 50 and move forward 5 places to 100. Place a box around the number 50.



8. Now show students the number line made from the 1,000's chart along with the 1,000's chart on the SB. "How is this number line similar to the 1,000's chart?" (numbers counting by tens, 0-1,000, number are in consecutive order) "How are they different?" (The number line is in a straight row.)

9. "What is the midpoint between 100 and 200?" Have students use the previous strategy to find the midpoint. (There are 10 groups of ten between 100 and 200, and half of 100 is 50, and we have 5 groups of 10 from 150 to 100 and 5 groups of 10 from 150 to 200) Continue this process all the way to 1,000, boxing in each midpoint.

10. "What did you notice about all of the numbers between each group of hundreds?"(Students may say they had a 5 in the tens place---help them also clearly understand that they were all in the middle of two consecutive groups of hundreds.) Go back to the thousands chart to verify this.

11. "Now, we will use number lines to round numbers to the nearest hundred."

Guided Practice 3: Rounding a 3-digit number to the nearest 100

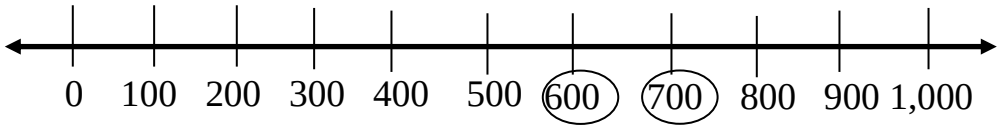
Frito-Lay delivered 638 bags of Hot Cheetos to Hemmenway Elementary. About how many bags of Hot Cheetos did Hemmenway get if they rounded the number of bags to the nearest hundred?

Begin the **"Four-Step Problem Solving"** process with the students.

Main Idea: about # HC rounded to nearest 100?
Details/Known: 638 bags
Strategy: # line

1. "Let's decide which digits in the number 638 we should use to round to the nearest group of 100." (all digits, 638) "Why?" (Because the 6 is in the 100's place and we are rounding to the nearest group of 100.) "How will we use the 38 behind the 6?" (It will help us determine the nearest group of hundred)

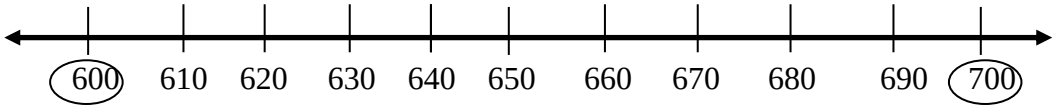
2. "Let's make a number line using multiplies of 100." Students should use the blank number line page provided. "Which 2 groups of hundreds is 638 between on the number line? Which group of hundred is immediately before 638?" (600) "Which group of hundred is immediately after 638?" (700)



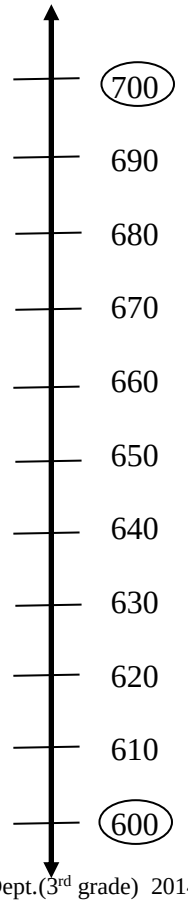
3. "Now that we have determined the two groups of hundreds we need, we will continue to round by "zooming in" on the numbers between 600 and 700. Let's make a number line that starts with 600." Students should use the blank number line page provided.

4. Ask students, "How many groups of ten make one hundred?" (10 groups) "So, how many groups of ten do we need to get from 600 to 700 on the number line?" (10) "Notice we have 10 even spaces on our number line. Now, let's count by multiples of 10 starting with the number 600, and fill in the numbers on our number line." (610, 620, 630…700) Students could write the numbers vertically if more space is needed. "Let's circle 600 and 700, our 2 hundreds."

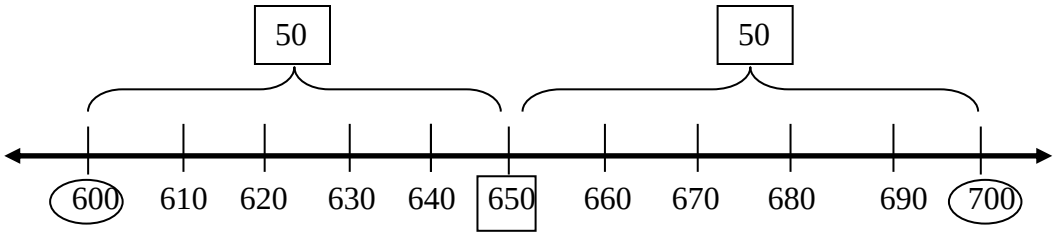
   Horizontal Number Line:



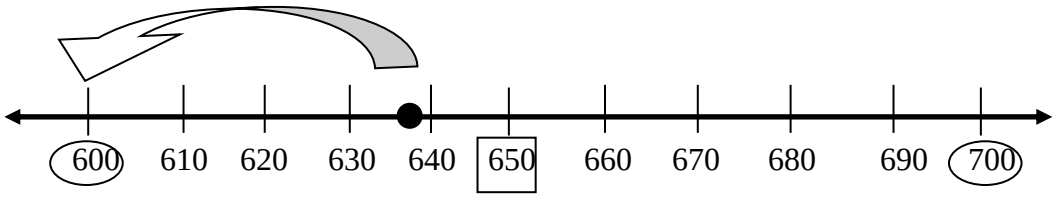
   Vertical Number Line:



5. "What number is the midpoint?" (650) "Why?" (because it takes 10 groups of ten to make 100, and half of 100 is 50, and we have 5 groups of 10 from 650 to 600 and 5 groups of 10 from 650 to 700) "Let's put a small box around 650, our midpoint."



6. "Now, let's place a dot on the number 638 on the number line. Why are we doing that?" (because it is the number we are rounding to the nearest 100)



7. "So, what group of 100 does 638 round to?" (600) "Why?" (because 638 is closer to 600 than 700)

8. "What if we were rounding 638 to the nearest group of ten? Could we use this number line?" (no) "Why not?" (when rounding to the nearest group of ten we need to "zoom in" on 2 multiples of ten, this number line is "zooming in" on 2 multiples of 100)

How/Why: made a # line, rounded down because 638 is closer to 600 than 700.

Guided Practice 4: Round a 4-digit number to the nearest 100.

This strategy will be used to round 4 and 5-digit numbers to the nearest 100.

The Hayes Family is taking a car trip. They will drive 1,350 miles to visit family members in New York City. About how many miles will the Hayes Family drive if they round the miles to the nearest hundred?

Begin the "**Four-Step Problem Solving**" process with the students.

Main Idea: about # miles to the nearest 100?
Details: 1,350 miles
Strategy: # line

1. "Let's decide which digits in the number 1,350 we should use to round to the nearest group of 100." (350) "Why?" (because the 3 is in the 100's place and we are rounding to the nearest group of 100) "How will we use the 50?" (it will help us determine the nearest group of hundreds.)

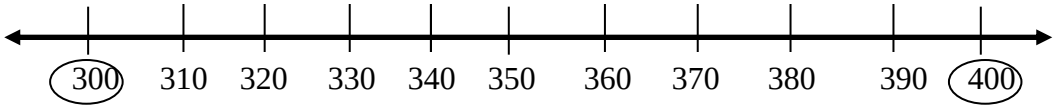
2. "Do you notice any digits in 1,350 that may not help us round to the nearest group of 100?"(1) "Why?" (because 1 is in the thousands place and it has a greater value than the hundreds.)

3. "Ok, let's put a box around the number 350, so we don't get confused about which place value we are rounding to." (1, 350)

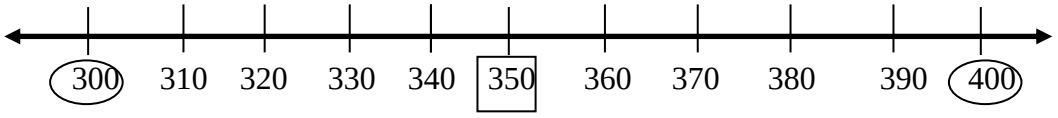
4. "Let's make a number line using multiples of 100. Which two groups of hundreds is 350 between on the number line? Which group of hundred is immediately before 350?" (300) "Which group of hundred is immediately after 350?" (400)

5. "Now that we have determined the two groups of hundreds we need, we will continue to round by "zooming in" on the numbers between 300 and 400. Let's make a number line that starts with 300." Students should use the blank number line page provided.

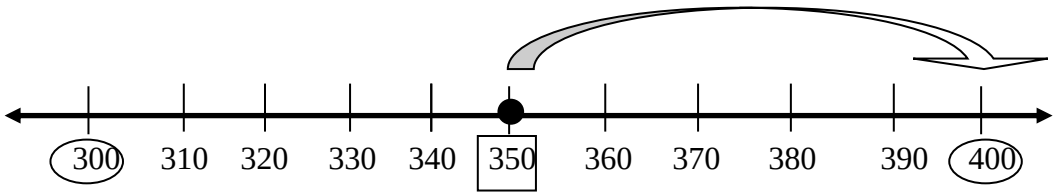
6. Ask students, "How many groups often make one hundred?" (10 groups) "So, how many groups often do we need to get from 300 to 400 on the number line?" (10) "Notice we have 10 even spaces on our number line." "Now, let's count by multiples of 10 starting with the number 300, and fill in the numbers on our number line." (310, 320, 330…400) Students could write the numbers vertically if more space is needed. "Let's circle 300 and 400, our 2 hundreds.



7. "What number is the midpoint?" (350) "Why?" (because it takes 10 groups of ten to make 100, and half of 100 is 50, and we have 5 groups of 10 from 350 to 300 and 5 groups of 10 from 350 to 400) "Let's put a small box around 350, our midpoint."



8. "Now, let's place a dot on the number 350 on the number line. Why are we doing that?" (because it is the number we are rounding to the nearest 100)

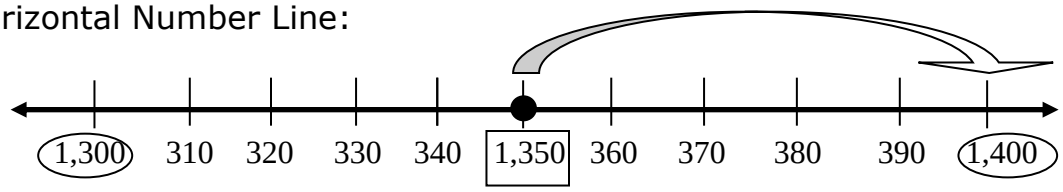


9. "Which group of hundred does 350 round to?" (400) "Why?" (because one of the rules of mathematics, made by mathematicians long ago, is to round up if we are at or past the midpoint)

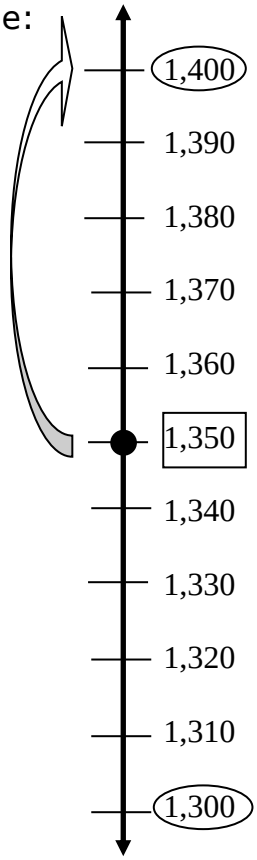
10. "Now that we have located the nearest group of hundred to 350, it's time to think about our original number. What number are we rounding to the nearest group of hundred?" (1,350)

11. "How can we show 350 as 1,350 on our number line?" (We can place a 1 in the thousands place on our number line.) "That could get a little crowded, so let's place a 1 in the thousands place for 300 and 400, our hundreds." Students could also write the numbers vertically to include the thousands place. "Let's also place a 1 in the thousands place for 350, the number we are rounding to the nearest hundred."

Horizontal Number Line:



Vertical Number Line:



12. "So, what 100 does 1,350 round to?" (1,400) "Why?" (because one of the rules of mathematics is to always round up if we are at or past the midpoint, so 1,350 rounds up to 1,400)

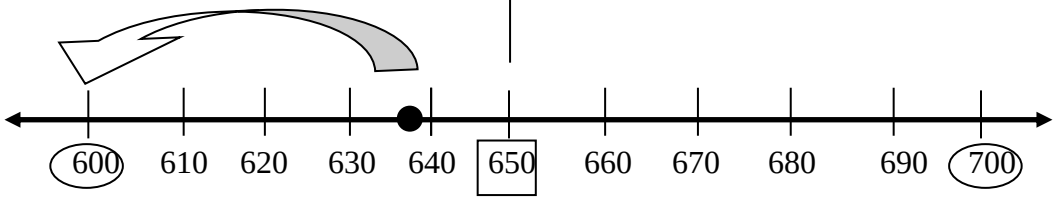
How/Why: drew a number line, rounded to hundreds and rounded up to 1,400

Rounding to the Nearest Hundred

Guided Practice 3

Frito-Lay delivered 638 bags of Hot Cheetos to Hemmenway Elementary. About how many bags of Hot Cheetos did Hemmenway get if they rounded the number of bags to the nearest hundred?

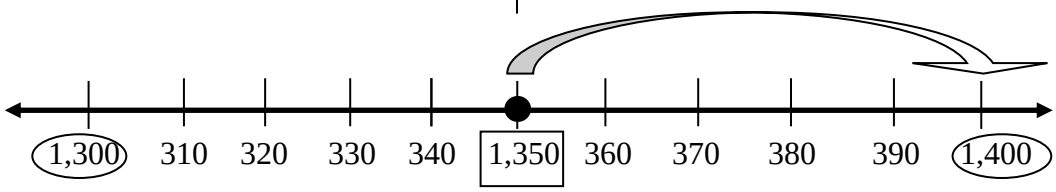
About # HC rounded to nearest 100?	About = ROUND 638 Hot Cheetos
# line	• made # line • rounded down • 638 is closer to 600 • 638 is farther away from 700



Guided Practice 4

The Hayes Family is taking a car trip. They will drive 1,350 miles to visit family members in New York City. About how many miles will the Hayes Family drive if they round the miles to the nearest hundred?

About # miles rounded to nearest 100?	About = ROUND 1,350 Hot Cheetos
# line	• made # line • rounded up • 1,350 is closer to 1,400 • 1,350 is farther away from 1,300



Rounding to the Nearest Hundred

Guided Practice 3

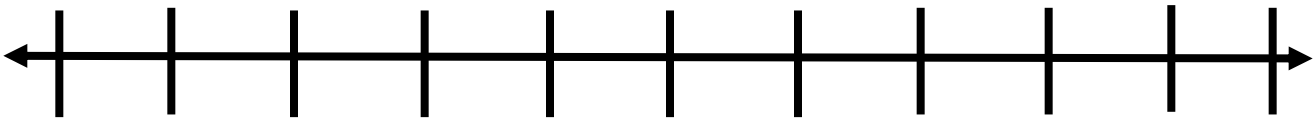
Frito-Lay delivered 638 bags of Hot Cheetos to Hemmenway Elementary. About how many bags of Hot Cheetos did Hemmenway get if they rounded the number of bags to the nearest hundred?

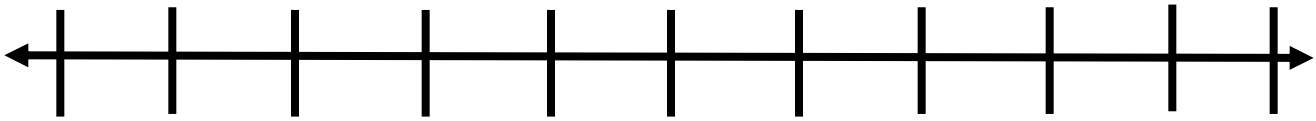
Guided Practice 4

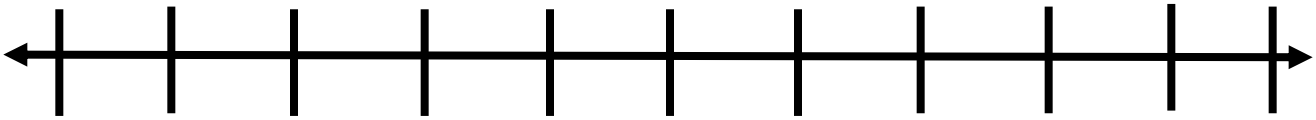
The Hayes Family is taking a car trip. They will drive 1,350 miles to visit family members in New York City. About how many miles will the Hayes Family drive if they round the miles to the nearest hundred?

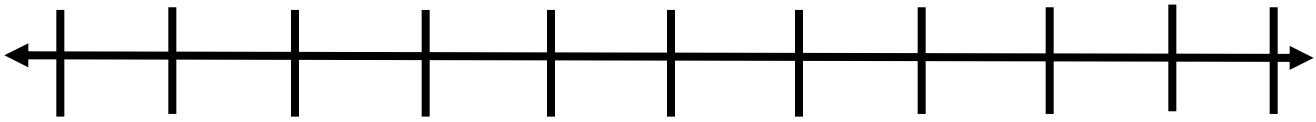
Thousands Chart

10	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
110	**120**	**130**	**140**	**150**	**160**	**170**	**180**	**190**	**200**
210	**220**	**230**	**240**	**250**	**260**	**270**	**280**	**290**	**300**
310	**320**	**330**	**340**	**350**	**360**	**370**	**380**	**390**	**400**
410	**420**	**430**	**440**	**450**	**460**	**470**	**480**	**490**	**500**
510	**520**	**530**	**540**	**550**	**560**	**570**	**580**	**590**	**600**
610	**620**	**630**	**640**	**650**	**660**	**670**	**680**	**690**	**700**
710	**720**	**730**	**740**	**750**	**760**	**770**	**780**	**790**	**800**
810	**820**	**830**	**840**	**850**	**860**	**870**	**880**	**890**	**900**
910	**920**	**930**	**940**	**950**	**960**	**970**	**980**	**990**	**1,000**









Part III: - Round a 4-digit number to the nearest 1,000.

Guided Practice 5

Peyton has 2,378 coins in his coin collection. About how many coins does Peyton have, rounded to the nearest thousand?

Begin the "**Four-Step Problem Solving**" process with the students.

Main Idea: about # coins to the nearest 1,000?
Details: 2,378 coins
Strategy: # line

1. "Let's decide which digits in the number 2,378 we should use to round to the nearest group of 1,000." (2,378) "Why?" (because the 2 is in the 1,000's place and we are rounding to the nearest group of 1,000) "How will we use 378?" (it will help us determine the nearest group of thousands)

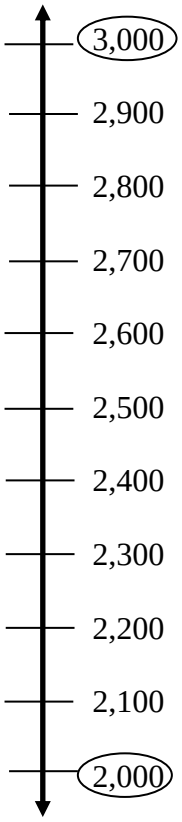
2. "Let's make a number line using multiples of 1,000. Which 2 groups of thousands is 2,378 between on the number line? Which group of thousands is immediately before 2,378?" (2,000) "Which group of thousands is immediately after 2,378?" (3,000)

3. "Now that we have determined the two groups of thousands we need, we will continue to round by "zooming in" on the numbers between 2,000 and 3,000. Let's make a number line that starts with 2,000."

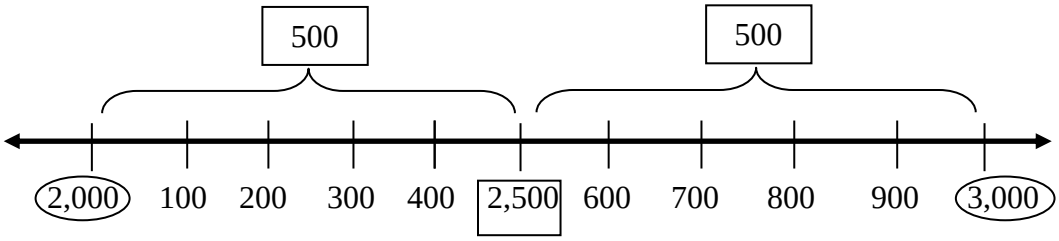
4. Ask students, "How many groups of one hundred make one thousand?" (10 groups) "So, how many groups of one hundred do we need to get from 2,000 to 3,000 on the number line?" (10) "Let's make 10 evenly spaced hash marks on our number line. Now, let's count by multiples of 100 starting with the number 2,000, and fill in the numbers on our number line. To avoid crowding our number line, let's label the hundreds only" (2,100, 200, 300…3,000) Students could also write the numbers vertically to include the thousands place. "Let's circle 2,000 and 3,000, our 2 thousands.

Horizontal Number Line:

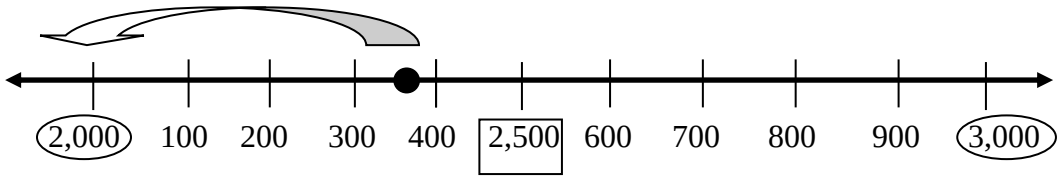
Vertical Number Line:



5. "What number is the midpoint?" (2,500) "Why?" (because it takes 10 groups of 100 to make 1,000, and half of 1,000 is 500, and we have 5 groups of 100 from 2,500 to 2,000 and 5 groups of 100 from 2,500 to 3,000) "Let's label 2,500, our midpoint, and put a small box around it."



6. "Now, let's place a dot on the number 2,378 on the number line. Why are we doing that?" (because it is the number we are rounding to the nearest 1,000)



7. "So, what group of thousands does 2,378 round to?" (2,000) "Why?" (because 2,378 is closer to 2,000 than 3,000)

How/Why: drew a number line, rounded to thousands and rounded down to 2,000

Guided Practice 6 - Round a 5-digit number to the nearest 1,000.

Trenton has a high score of 43,526 points on a computer game. Rounded to the nearest thousand, about how many points does Trenton have?

Begin the "**Four-Step Problem Solving**" process with the students.

Main Idea: about # points to the nearest 1,000?
Details: 42,526 coins
Strategy: # line

1. "Let's decide which digits in the number 43,526 we should use to round to the nearest group of 1,000." (3,526) "Why?" (because the 3 is in the 1,000's place and we are rounding to the nearest group of 1,000) "How will we use 526?" (it will help us determine the nearest group of thousands)

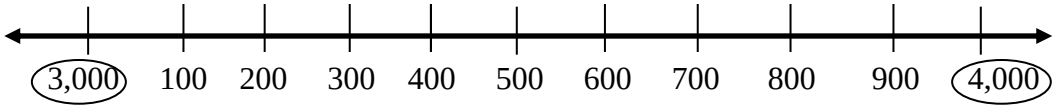
2. "Do you notice any digits in 43,526 that may not help us round to the nearest 1,000?"(4) "Why?" (because 4 is in the ten thousands place and it has a greater value than the thousands.)

3. "Ok, let's put a box around the number 3,526, so we don't get confused about which place value we are rounding to." (43,526)

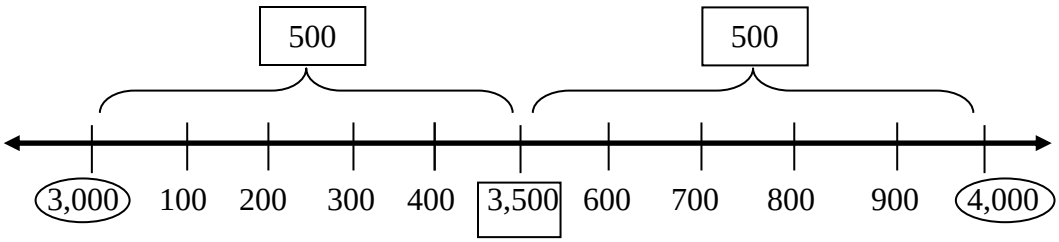
4. "Let's make a number line using thousands." "Which 2 groups of thousands is 3,526 between on the number line? Which group of thousands is immediately before 3,526?" (3,000) "Which group of thousands is immediately after 3,526?" (4,000)

5. "Now that we have determined the two groups of thousands we need, we will continue to round by "zooming in" on the numbers between 3,000 and 4,000. Let's draw a number line that starts with 3,000."

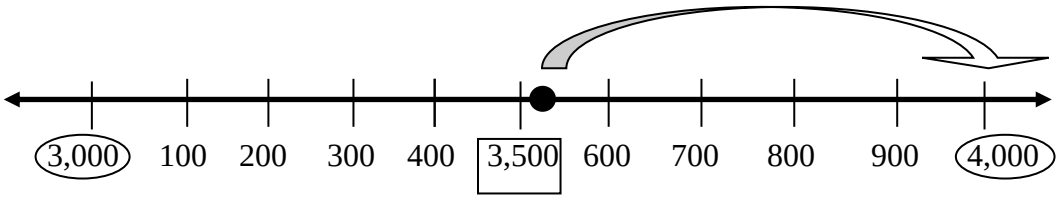
6. Ask students, "How many groups of one hundred make one thousand?" (10 groups) "So, how many groups of one hundred do we need to get from 3,000 to 4,000 on the number line?" (10) "Let's make 10 evenly spaced hash marks on our number line. Now, let's count by 100's starting with the number 3,000, and fill in the numbers on our number line. To avoid crowding our number line, let's label the hundreds only." (3,100, 200, 300…4,000) Students could also write the numbers vertically to include the thousands place. "Let's circle 3,000 and 4,000, our 2 thousands.



7. "What number is the midpoint?" (3,500) "Why?" (because it takes 10 groups of one hundred to make 1,000, and half of 1,000 is 500, and we have 5 groups of 100 from 3,500 to 3,000 and 5 groups of 100 from 3,500 to 4,000) "Let's label 3,500, our midpoint, and put a small box around it."



8. "Now, let's place a dot on the number 3,526 on the number line. Why are we doing that?" (because it is the number we are rounding to the nearest 1,000)

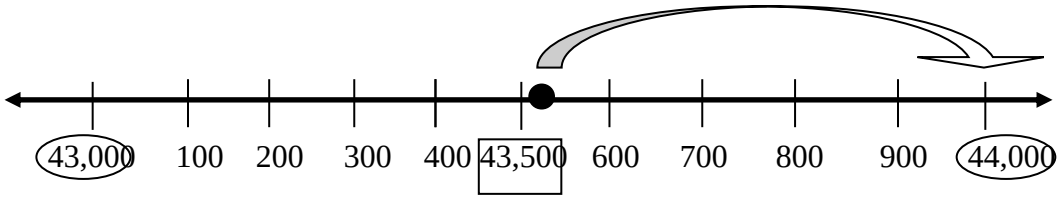


9. "So, what group of thousands does 3,526 round to?" (4,000) "Why?" (because 3,526 is closer to 4,000 than 3,000)

10. "Now that we have located the nearest group of thousands to 3,526, it's time to think about our original number. What number are we rounding to the nearest group of thousands?" (43,526)

11. "How can we show 3,526 as 43,526 on our number line?" (We can place a 4 in the ten thousands place on our number line) "That could get a little crowded, so let's place a 4 in the ten thousands place for 3,000 and 4,000, our thousands.

Let's also place a 4 in the ten thousands place for 3,500, our midpoint." Students could also write the numbers vertically to include the thousands and ten thousands place.



12. "So, what group of thousands does 43,526 round to?" (44,000) "Why?" (Because 43,526 is closer to 44,000 than 43,000)

How/Why: drew a number line, rounded to thousands and rounded up to 44,000

Part IV - Round a 5-digit number to the nearest 10,000.

Guided Practice 7

The Houston Texans play football at NRG Stadium. NRG Stadium can seat 71,054 people. About how many people can NRG Stadium seat rounded to the nearest ten thousand?

Begin the "**Four-Step Problem Solving**" process with the students.

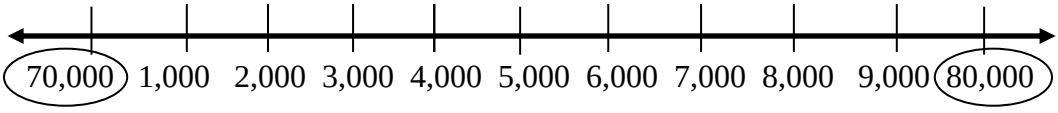
Main Idea: about # people to the nearest 10,000?
Details: 71,054 people
Strategy: # line

1. "Let's decide which digits in the number 71,054 we should use to round to the nearest group of 10,000." (71,054) "Why?" (because the 7 is in the 10,000's place and we are rounding to the nearest group of 10,000) "Why is the number 1,054 important?" (because it will help us determine the nearest group of ten thousand.)

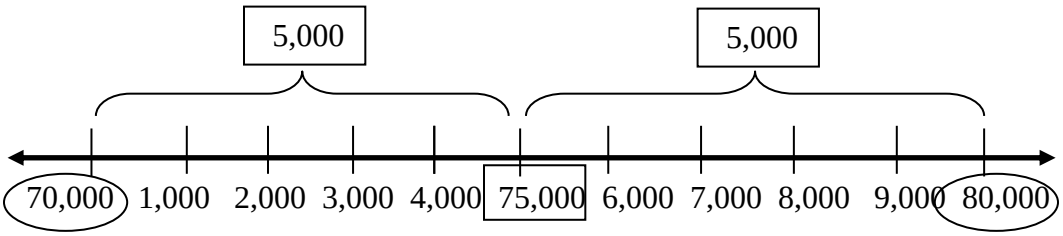
2. "Let's make a number line using multiples of ten thousand. Which 2 groups of ten thousands is 71,054 between on the number line? Which group of ten thousand is immediately before 71,054?" (70,000) "Which group of ten thousand is immediately after 71,054?" (80,000)

3. "Now that we have determined the two groups of ten thousand we need, we will continue to round by "zooming in" on the numbers between 70,000 and 80,000. Let's draw a number line that starts with 70,000."

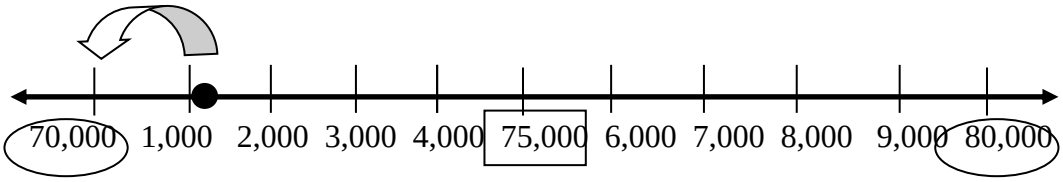
4. Ask students, "How many groups of one thousand make ten thousand?" (10 groups) "So, how many thousands do we need to get from 70,000 to 80,000 on the number line?" (10) "Let's make 10 evenly spaced hash marks on our number line. Now, let's count by 1,000's starting with the number 70,000, and fill in the numbers on our number line. To avoid crowding our number line, let's label the thousands only" (71,000, 2,000, 3,000…80,000) Students could also write the numbers vertically to include the ten thousands place. "Let's circle 70,000 and 80,000, our 2 thousands.



5. "What number is the midpoint?" (75,000) "Why?" (because it takes 10 groups of thousands to make 10,000, and half of 10,000 is 5,000, and we have 5 groups of 1,000 from 75,000 to 70,000 and 5 groups of 1,000 from 75,000 to 80,000)
   "Let's label 75,000, our midpoint, and put a small box around it."



6. "Now, let's place a dot on the number 71,054 on the number line. Why are we doing that?" (because it is the number we are rounding to the nearest 10,000)



7. "So, what group of ten thousand does 71,054 round to?" (70,000) "Why?" (because 71,054 is closer to 70,000 than 80,000)

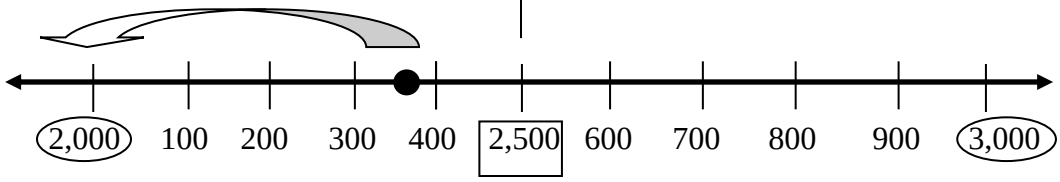
How/Why: drew number line, rounded to ten thousands, rounded down to 70,000

Rounding to the Nearest Thousand and Ten Thousand

Guided Practice 5

Peyton has 2,378 coins in his coin collection. About how many coins does Peyton have, rounded to the nearest thousand?

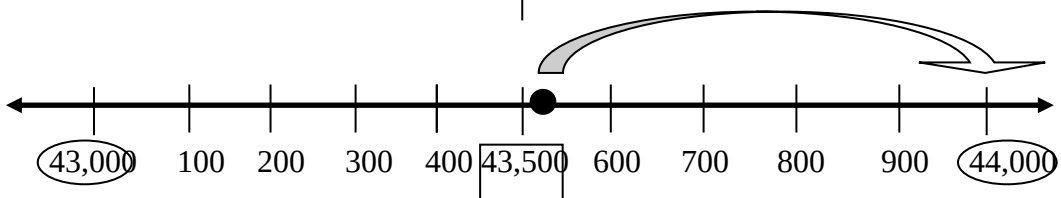
About # coins rounded to nearest 1,000?	About = ROUND 2,378 coins
# line	• made # line • rounded down • 2,378 is closer to 2,000 • 2,378 is farther away from 3,000



Guided Practice 6

Trenton has a high score of 43,526 points on a computer game. Rounded to the nearest thousand, about how many points does Trenton have?

About # points rounded to nearest 1,000?	About = ROUND 43,526 points
# line	• made # line • rounded up • 43,526 is closer to 44,000 • 43,526 is farther away from 43,000



Rounding to the Nearest Thousand and Ten Thousand

Guided Practice 5

Peyton has 2,378 coins in his coin collection. About how many coins does Peyton have, rounded to the nearest thousand?

Guided Practice 6

Trenton has a high score of 43,526 points on a computer game. Rounded to the nearest thousand, about how many points does Trenton have?

Rounding to the Nearest Thousand and Ten Thousand

Guided Practice 7

The Houston Texans play football at NRG Stadium. NRG Stadium can seat 71,054 people. About how many people can NRG Stadium seat rounded to the nearest ten thousand?

Compare and Order Whole Numbers

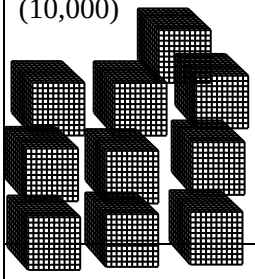
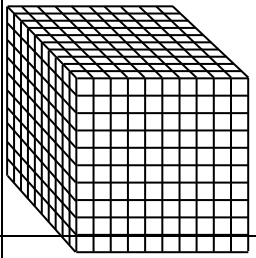
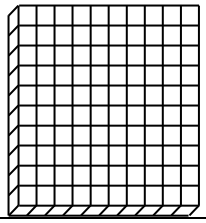
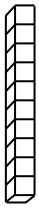
TEKS: 3.2d –Compare and order whole numbers up to 100,000 and represent comparisons using the symbols < , >, or =.

VOCABULARY: compose, decompose, greater than, less than, largest, smallest, greatest, fewest, least, between, equal, value, digit, order numbers

MATERIALS: Guided Practice Problem, PV chart and blocks, IMN

NOTE: **Target Problems** are included for use in conjunction with the Teacher Notes. In the Practice Problems, some are marked with an "*". It is suggested that you include these problems in your unit. There is also a model window pane problem on some target problems to use as a Guided Practice. Additional problems are also included as needed.

Note: If students are working in pairs, you may want to give each student a place value mat.

Ten Thousands (10,000)	Thousands (1000)	Hundreds (100)	Tens (10)	Ones (1)
				

See p. 122 for printable Place Value Mat.

Give each pair of students or (table groups of students) sets of base ten blocks. The sets should include 2 or 3 "thousand" cubes.

Part 1: **Comparing 3-Digit Numbers.**

Guided Practice 1

Ask students, "What do you think comparing and ordering numbers means?" Have them discuss with their elbow partner and then share aloud. (seeing how the numbers are alike and different) Have students put the title "Comparing and Ordering Numbers" in their Table of Contents in their **IMN**. Also, have them title the next clean page "Comparing and Ordering Numbers".

Begin **"Four-Step Problem Solving"** with students.

Mr. Tucker ordered a shipment of 629 apples for his fruit stand. Mrs. Lawrence ordered 692 apples for her fruit stand. Build each number with base 10 blocks. Who ordered more apples? Explain?

Main Idea: Who has most apples?

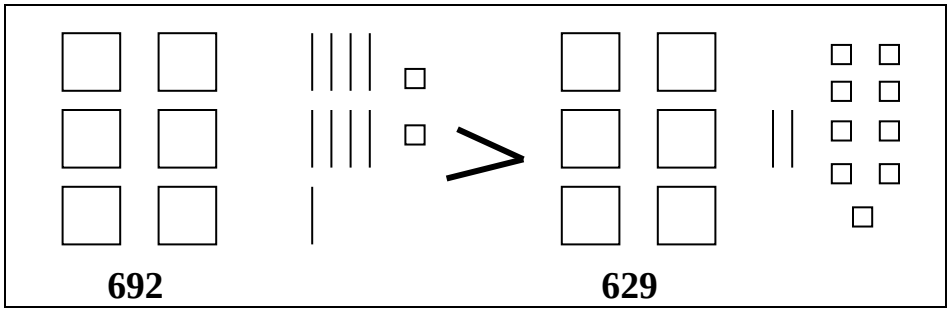
Details: 629 and 692

2. **Strategy:** Have the pair of students build 629 with base ten blocks on one place value mat. Ask students to tell you the value of each of the digits in the number they built. For example, 2 is in the tens place and has a value of 20. Also, have someone read the number out loud. Say, "How many hundreds are there in 629?" (6) "How many tens?" (2) "How many ones?" (9)

3. On another place value mat, the pair of students should build the number 692 with base ten blocks. Have a student read the number out loud. Discuss the values of the digits as you did in the number 629.

4. Have the students set the two mats near each other so that 629 is built on one mat, and 692 is on the other. Ask the students, "Which number is larger?" (692) "How do you know?" (9 tens is larger than 2 tens) "How can the blocks help you see which number is larger?" (The mat with 692 will have more blocks.) Talk with the students about the place of each of the digits and the value that each digit has. Have the students compare the values of the digits by using the blocks.

5. Have each student draw a picture on paper to represent 629 being less than 692. It could look similar to the following:



6. Ask students, "What does 'greater than' mean?" (more than) Record in **IMN** under title already set up. "What does 'less than' mean?" (fewer or less) Record in **IMN**. Have the students put a >, <, or = sign in between the two mats (numbers they built) to make a true statement. Have several students read the statement out loud. For example, "692 is greater than 629, or 629 is less than 692."

7. Have students write each number in a place value chart. Then have them stack each digit's value in the chart.

6 hundreds + 9 tens + 2 ones > 6 hundreds + 2 tens + 9 ones
Now show the values as addition. What is this form called? (*Expanded form*)
600 + 90 + 2 > 600 + 20 + 9

Ones

hundreds	tens	ones
6	9	2
6	0	0
	9	0
		2

600
90
+ 2
692

Ones

hundreds	tens	ones
6	2	9
6	0	0
	2	0
		9

600
20
+ 9
629

600 + 90 + 2 = 692 > 600 + 20 + 9 = 629

692 > 629

629 < 692

8. "How would you determine how much bigger 692 is than 629?" (Subtract, or compare 692 and 629)

Have the students clear their mats.

Part II: Comparing 4-Digit Number

Guided Practice #2:

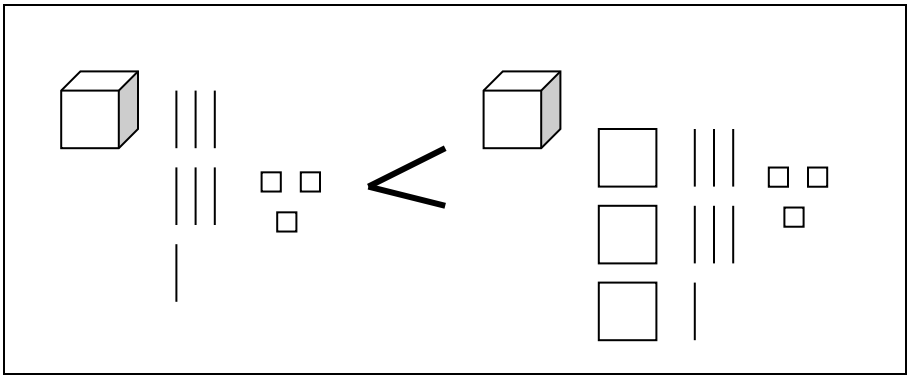
Begin **"Four-Step Problem Solving"** with students.

The high school sold 1,073 tickets to its first football game of the season. Then they sold 1,373 tickets to the second football game. Which game sold the fewest number of tickets? Build with base 10 blocks and compare.

Main Idea: Game sold fewest tickets

Details: 1,073 and 1,373

2. **Strategy:** Have the pair of students build 1,073 with base 10 blocks on one base 10 mat. Ask the students to tell you the value of each of the digits in the number they built. For example, the value of the 1 is one thousand. Ask a student to read the number out loud. "How many thousands are in the number 1,073?" (1) "How many hundreds?" (0) "How many tens?" (7) "How many ones?" (3)
3. On another base 10 mat, the pair of students should build the number 1,373 with base 10 blocks. Ask a student to read the number out loud and discuss the values of each digit. Have the students set the two mats near each other so that 1,073 is built on one mat and 1,373 is built on the other.
4. Have the students draw a picture to represent their statement in their **IMN**. It might look like the following:



1,073 **1,373**

Have the students write the values of their blocks and then write in expanded form.

1 thousand + 7 tens + 3 ones < 1 thousand + 3 hundreds + 7 tens + 3 ones

Thousands Ones

HT	TT	T	hundreds	tens	ones
		1	0	7	3
		1	0	0	0
				7	0
					3

Thousand

1000
70
+ 3
1,073

Thousands Ones

HT	TT	T	hundreds	tens	ones
		1	3	7	3
		1	0	0	0
			3	0	0
				7	0
					3

Thousand

1000
300
70
+ 3
1,373

1000 + 70 + 3 = 1,073 < 1000 + 300 + 70 + 3 = 1,373

1,073 < 1,373

1,373 > 1,073

5. Ask the students, "What is different about these two numbers?" (one is bigger than the other) “Which number is larger? (1,373) “How do you know? “ (There are more blocks on the mat with 1,373 blocks.) “How can the blocks help you see which number is larger or smaller?” (There are more blocks there to see.) "What is another way to show that 1,373 is larger?" (Look at each place value. Since the thousands digit is the same, look at the hundreds place. The 3 is larger than the 0 in the hundreds place.) Talk with the students about the values of the two numbers and the differences between the two numbers.

6. Have the students put a >, <, or = sign in between the two mats (numbers they built) to make a true statement. Have several students read a statement out loud. For example, “1,373 is greater than 1,073, or 1,073 is less than 1,373.”

7. “How might you find how much less 1,073 is than 1,373?” (Subtract or compare 1,073 and 7,373)

Part III: **Comparing 5-Digit Numbers**
Guided Practice #3:

Begin **“Four-Step Problem Solving”** with students.

The Denver Broncos football team wanted to see which day of the week the attendance was higher. On Sunday the attendance was 67,826 people, and on Monday, the attendance was 67,043. Which day of the week had more people attend the game? Build with base 10 blocks and compare.

Main Idea: Day more people?

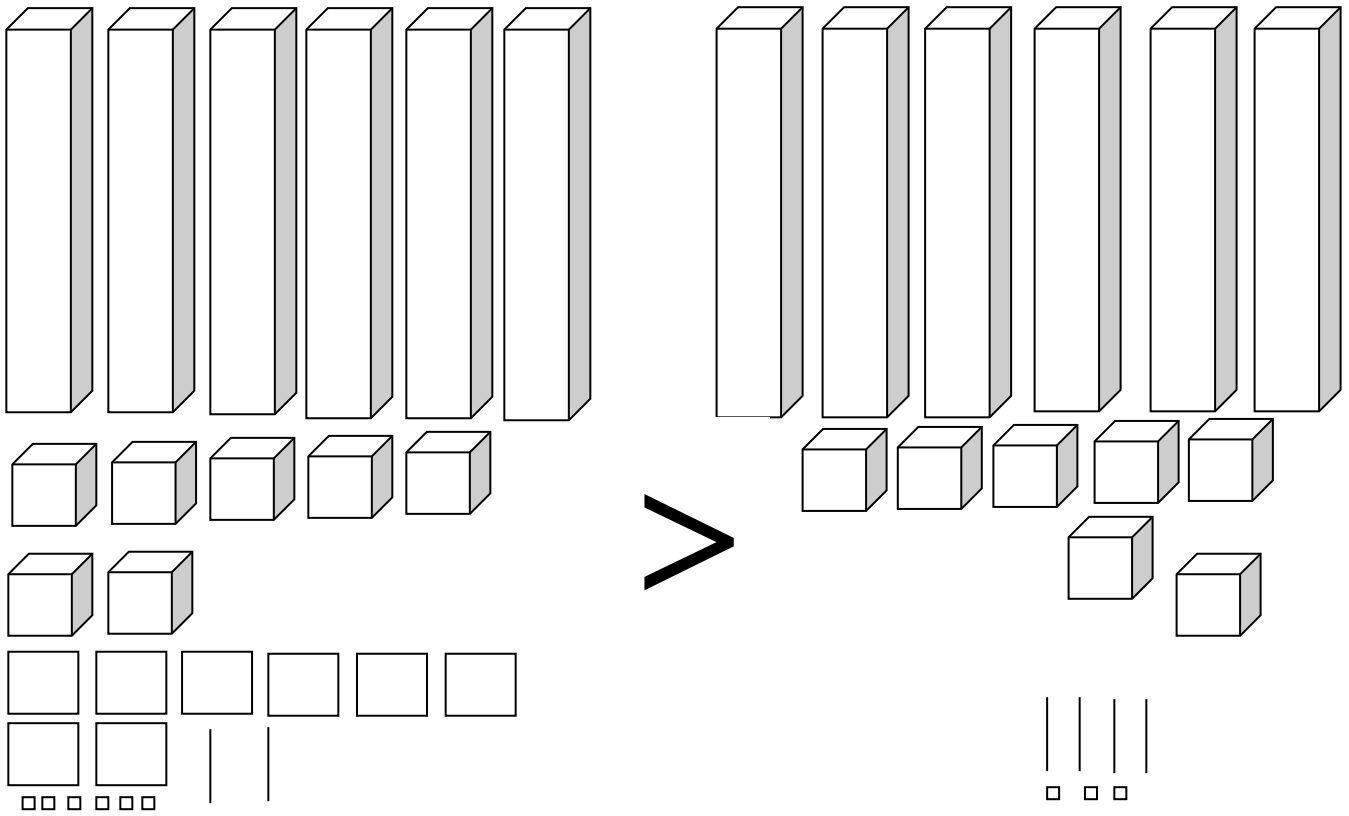
Details: 67,826 and 67,043.

2. **Strategy:** As a class, have several students build 67,826 with base 10 blocks on one base 10 mat. (You may have to work as a class or grade level to have enough blocks, or create blocks out of large butcher paper.) Ask the students to tell you the value of each digit. "What does value mean?" (how much the digit is worth) Record the definition of value in **IMN**. “What is the value of the 6?” (sixty thousand) “What is the value of the 7?” (seven thousand) “What is the value of the 8?” (eight hundred) “What is the value of the 2?” (twenty) “What is the value of the 6?” (6 ones) Ask a student to read the number out loud. "What is the difference between this number and the numbers in the last example?" (These have 5 digits and the last example had 4 digits.)

3. On another base 10 mat, another few students should build the number 67,043 with base 10 blocks. (Again, you may have to combine thousands blocks, or create blocks out of large butcher paper.) Ask a student to read the number out loud and discuss the values of

each digit, just like you did with the previous number. The mats should be placed close to each other, so that 67,826 is built on one mat and 67,043 is built on the other.

4. Have the students draw a picture to represent their statement in **IMN**. It might look like the following:



67,826 > 67,043

Have the students write the values of their blocks and then write in expanded form.

6 ten-thousands +7 thousands + 8 hundreds + 2 tens + 6 ones > 6 ten thousands + 7 thousands + 4 tens + 3 ones

Thousands Ones

HT	TT	T	hundreds	tens	ones
	6	7 ,	8	2	6
	6	0	0	0	0
		7	0	0	0
			8	0	0
				2	0
					6

Thousand

60,000
7,000
800
20
+ 6
67,826

Thousands Ones

HT	TT	T	hundreds	tens	ones
	6	7 ,	0	4	3
	6	0	0	0	0
		7	0	0	0
				4	0
					3

Thousand

60,000
7,000
40
+ 3
67,043

60,000+7,000+800+20+6 > 60,000+7,000+40+3

67,826 > 67,043

5. Ask the students, “Which number is larger?” (67,826) “How do you know?” (There are more blocks on the mat with 67,826.) “How can the blocks help you see which number is larger or smaller?” (There are more blocks there to see.) "What is another way to see that 67,826 is larger?" (Look at each place value) "Let's start at the ten thousands place, since it is the largest. What do you notice?" (They are the same value.) "Let's move to the thousands place. What do you notice?" (They are the same value.) "Let's move to the hundreds place. What do you notice?" (The 8 is larger than the 0 in the hundreds place.) "So what does that mean?" (67,826 is greater than 67,043.) Talk with the students about the values of the two numbers and the differences between the two numbers.

6. Have the students put a >, <, or = sign in between the two mats (numbers they built) to make a true statement. Have several students read a statement out loud. For example, “67,826 is greater than 67,043.”

7. “How might you find how much less 67,043 is than 67,826?” (Subtract or compare 67,043 and 67,826.)

Part IV: **Comparing several 4-digit Number**s
Guided Practice #4:

Begin **“Four-Step Problem Solving”** with students.

The movie theater kept track of how many tickets it sold for 4 days in a row. The chart below shows how many tickets it sold on each of the 4 days.

Day	Tickets Sold
Thursday	1,039
Friday	1,390
Saturday	1,309
Sunday	1,030

Which list below shows the days in order from the day it sold the least number of tickets to the day it sold the most?

A. Friday, Saturday, Thursday, Sunday
B. Sunday, Thursday, Friday, Saturday
C. Sunday, Thursday, Saturday, Friday
D. Saturday, Friday, Sunday, Thursday

Main Idea: List least to greatest?

Details: 1,039 and 1,390 and 1,309 and 1,030

1. **Strategy:** Have students write the 4 numbers using the "stacking method." Students will write each number in the same place value chart. "What does ordering numbers mean?" (Putting things into their correct place following a rule) Record definition in IMN under "Comparing and Ordering Numbers". "We need to order the numbers from least to most or greatest? What does that mean?" (The smallest number is the least, and it is first. The largest number is the greatest) Record 'least' and 'greatest' in IMN. When we compare and order numbers, we start from left to right because we are comparing the numbers with the largest value first. It will be the thousands place.

*Ask them, "What is the smallest number in the thousands place?" (They are all the same value, so there is nothing to compare.) Cross the 1's off. Ask them to move to the next largest value. (Hundreds place)

	Thousand	Hundreds	Tens	Ones
Thursday	1	0	3	9
Friday	1	3	9	0
Saturday	1	3	0	9
Sunday	1	0	3	0

* Ask, "What days will I be focusing on right now?" (Thursday and Sunday) "Why?" (Because 0 hundreds is less than 3 hundreds) "Let's cover up Friday and Saturday, since we will be focusing on Thursday and Sunday first. We can look at them later."

*Ask them, "What is the smallest number in the hundreds place?" ('0' for Thursday (1,039) and for Sunday (1,030). Since the 0's are the same value, cross out the 0's. "Why?" (Because they have the same value.) Ask students to look at the next largest value of those two numbers. (Tens place)

	Thousand	Hundreds	Tens	Ones
Thursday	1	0	3	9
Friday	1	3	9	0
Saturday	1	3	0	9
Sunday	1	0	3	0

*Ask them, "What is the smallest number in the tens place on Thursday and Sunday?" ("3" for Thursday (1,039) and Sunday (1,030). Since the 3's are the same value, cross out 3's. "Why?" (Because they have the same value) Ask students to look at the next largest value. (Ones place)

	Thousand	Hundreds	Tens	Ones
Thursday	1	0	3	9
Friday	1	3	9	0
Saturday	1	3	0	9
Sunday	1	0	3	0

*Ask them, "Still looking at Thursday and Sunday, what is the smallest number in the ones place?" ("0" for Sunday (1,030). This means Sunday (1,030) is the smallest number. Label #1 next to Sunday. The next smallest number is Thursday (1,039). Label #2 next to Thursday.

	Thousand	Hundreds	Tens	Ones	
Thursday	1	0	3	9	**2**
Friday	1	3	9	0	
Saturday	1	3	0	9	
Sunday	1	0	3	0	**1**

2. Look at the two remaining days Friday (1,390) and Saturday (1,309).

*Since the 1's have the same value in the thousands place, and we already crossed them out, ask students to look at the next largest value. (Hundreds place)

*Ask them, "What is the smallest number in the hundreds place?" ("3" for both Friday (1,390) and Saturday (1,309). Since the 3's are the same value, cross out the 3's, and ask students to look at the next largest value. (Tens place)

*Ask them, "What is the smallest number in the tens place?" ("0" for Saturday (1,309). This means Saturday (1,309) is the next smallest number. Label #3 next to Saturday. Look at Friday (1,390). This has a "9" in the tens place which would make it the largest number. Label #4 next to Sunday.

	Thousand	Hundreds	Tens	Ones	
Thursday	1	0	3	9	**2**
Friday	1	3	9	0	**4**
Saturday	1	3	0	9	**3**
Sunday	1	0	3	0	**1**

3. Have students write their answer out in words in order from least to greatest. (Sunday, Thursday, Saturday, and Friday)

4. Talk with the students about their answer choices. Ask them "why" they think their answer is right. Ask them to explain the steps they used to get their numbers in order from least to greatest. Have several students explain a process/way that can be used to check their answer.

5. At the end of the lesson, or at different times during the lesson, write some of the larger numbers that are being used "in words." For example, have the students write "one thousand, thirty" for 1,030.

Part V: Comparing several 5-digit Numbers

Guided Practice #5

Begin **"Four-Step Problem Solving"** with students.

At the arcade, the four highest scores were recorded for the Ninja Express game. The chart shows the four highest scores in random order.

Name	Score
Rick	42,698
Sam	39,587
Willie	41,665
Jason	41,212

Which list below shows the scores in order from the least score to the greatest score?

A. Rick, Sam, Willie, Jason
B. Willie, Jason, Rick, Sam
C. Sam, Jason, Willie, Rick
D. Sam, Jason, Rick, Willie

Main Idea: Scores least to greatest.

Details: 42,698 and 39,587 and 41,665 and 41,212

1. **Strategy:** Have students write the 4 numbers using the "stacking method." Students will write each number in the same place value chart.

When we compare numbers, we start from left to right because we are comparing the numbers with the largest value first. It will be the ten thousands place.

*Ask them, "Since we are going from least to greatest, what is the smallest number in the ten thousands place?" (They are not all the same value.)

	Ten Thousand	Thousand	Hundreds	Tens	Ones
Rick	4	2	6	9	8
Sam	3	9	5	8	7
Willie	4	1	6	6	5
Jason	4	1	2	1	2

*(The 3 is the smallest.) Place a 1 next to Sam's score on the left.

	Ten Thousand	Thousand	Hundreds	Tens	Ones	
Rick	4	2	6	9	8	
Sam	3	9	5	8	7	**1**
Willie	4	1	6	6	5	
Jason	4	1	2	1	2	

All of the other numbers in the ten thousands place are the same. Ask them to move to the next largest value. (thousands place)

*Ask them, "What is the smallest number in the thousands place?" ("1" for Willie (41,665) and for Jason (41,212). Since the 1's are the same value, cross out 1's, and ask students to look at the next largest value of those two numbers. (hundreds place)

	Ten Thousand	Thousand	Hundreds	Tens	Ones	
Rick	4	2	6	9	8	
Sam	3	9	5	8	7	**1**
Willie	4	~~1~~	6	6	5	
Jason	4	~~1~~	2	1	2	

*Ask them, "What is the smallest number in the hundreds place for Willie and Jason?" ("2" for Jason (41,212) because 200 is less than 600) Label a 2 next to Jason and cross Jason out.

	Ten Thousand	Thousand	Hundreds	Tens	Ones	
Rick	4	2	6	9	8	
Sam	3	9	5	8	7	**1**
Willie	4	1	6	6	5	
Jason	4	1	2	1	2	**2**

*Say, "So what would that mean for Willie?" (He would be the next smallest number.) "Why?" (Because the 1's in the thousands place were the same, since Jason was smaller, then Willie would be the next smallest number.) So label a 3 next to Willie, and cross him out.

	Ten Thousand	Thousand	Hundreds	Tens	Ones	
Rick	4	2	6	9	8	
Sam	3	9	5	8	7	**1**
Willie	4	1	6	6	5	**3**
Jason	4	1	2	1	2	**2**

Now we are left with only one number. Rick (42,698) "So what do we know about Rick?" (Rick is the largest number.) Label a 4 next to Rick.

	Ten Thousand	Thousand	Hundreds	Tens	Ones	
Rick	4	2	6	9	8	**4**
Sam	3	9	5	8	7	**1**
Willie	4	1	6	6	5	**3**
Jason	4	1	2	1	2	**2**

1. Have students write the names in order from least to greatest. (Sam, Jason, Willie, Rick)

2. Talk with the students about their answer choices. Ask them "why" they think their answer is right. Students can turn to their elbow partner, and explain why they think their answer is right. Ask them to explain the steps they used to get their numbers in order from least to greatest**.** Have several students share what their elbow partner shared, and explain a process/way that can be used to check their answer.

3. At the end of the lesson, or at different times during the lesson, write some of the larger numbers that are being used "in words." For example, have the students write "forty-one thousand, two hundred twelve or write out in expanded form (40,000+1,000+200+10+2).

4. Now as a closing activity, have students get out their **IMN** and talk to their elbow partner about what they have learned in the comparing and ordering numbers unit, including new vocabulary. Next, have students write a reflection on the student side of the **IMN** about what they learned and what they discussed with their elbow partner about how to compare and order numbers.

Guided Practice #1 – Comparing 3 Digit Numbers

Mr. Tucker ordered a shipment of 629 apples for his fruit stand. Mrs. Lawrence ordered 692 apples for her fruit stand. Build each number with base 10 blocks.

Who ordered more apples? Explain?

Guided Practice #2 – Comparing 4 Digit Numbers

The high school sold 1,073 tickets to its first football game of the season. Then they sold 1,373 tickets to the second football game.

Which game sold the fewest number of tickets?

Build with base 10 blocks and compare.

Guided Practice #3 Comparing 5 digit numbers.

The Denver Broncos football team wanted to see which day of the week the attendance was higher. On Sunday the attendance was 67,826 people, and on a Monday, the attendance was 67,043. Which day of the week had more people attend the game? Build with base 10 blocks and compare.

Guided Practice #4 – Comparing Several 4 Digit Numbers

The movie theater kept track of how many tickets it sold for 4 days in a row. The chart below shows how many tickets it sold on each of the 4 days.

Day	Tickets Sold
Thursday	1,039
Friday	1,390
Saturday	1,309
Sunday	1,030

Which list below shows the days in order from the day it sold the least number of tickets to the day it sold the most?

A. Friday, Saturday, Thursday, Sunday
B. Sunday, Thursday, Friday, Saturday
C. Sunday, Thursday, Saturday, Friday
D. Saturday, Friday, Sunday, Thursday

Guided Practice #5 Comparing several 5 digit numbers.

At the arcade, the four highest scores were recorded for the Ninja Express game. The chart shows the four highest scores in random order.

Name	Score
Rick	42,698
Sam	39,587
Willie	41,665
Jason	41,212

Which list below shows the scores in order from the least score to the greatest score?

A. Rick, Sam, Willie, Jason
B. Willie, Jason, Rick, Sam
C. Sam, Jason, Willie, Rick
D. Sam, Jason, Rick, Willie

Place Value Mat

Ten Thousands (10,000)	Thousands (1000)	Hundreds (100)	Tens (10)	Ones (1)