Name _____   Date _____

1. a. Arrange the following numbers in order from least to greatest:

   504,054   4,450   505,045   44,500

   b. Use the words *ten times* to tell how you ordered the two smallest numbers using words, pictures, or numbers.

2. Compare using >, <, or =. Write your answer inside the circle.

   a. 1 hundred thousand   ( )   10,000

   b. 200 thousands 4 hundreds   ( )   204,000

   c. 7 hundreds + 4 thousands + 27 ones   ( )   6 thousands + 4 hundreds

   d. 1,000,000   ( )   10 hundred thousands

3. The football stadium at Louisiana State University (LSU) has a seating capacity of 92,542.
   a. According to the 2010 census, the population of San Jose, CA, was approximately ten times the amount of people that LSU's stadium can seat. What was the population of San Jose in 2010?

   b. Write the seating capacity of the LSU stadium in words and in expanded form.

   c. Draw two separate number lines to round the LSU stadium's seating capacity to the nearest ten thousand and to the nearest thousand.

d. Compare the stadium's seating rounded to the nearest ten thousand and the seating rounded to the nearest thousand using >, <, or =.

e. Which estimate (rounding to the nearest ten thousand or nearest thousand) is more accurate? Use words and numbers to explain.

Mid-Module Assessment Task Standards Addressed	Topics A–C

Generalize place value understanding for multi-digit whole numbers.

4.NBT.1　Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division*.

4.NBT.2　Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

4.NBT.3　Use place value understanding to round multi-digit whole numbers to any place.

Evaluating Student Learning Outcomes

A Progression Toward Mastery chart is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left (Step 1) to right (Step 4). The learning goal for students is to achieve Step 4 mastery. These steps are meant to help teachers and students identify and celebrate what the students CAN do now and what they need to work on next.

A Progression Toward Mastery				
Assessment Task Item and Standards Assessed	STEP 1 Little evidence of reasoning without a correct answer. (1 Point)	STEP 2 Evidence of some reasoning without a correct answer. (2 Points)	STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)
1 **4.NBT.1**	The student arranged two numbers and provided no clear explanation for Part (b).	The student arranged two numbers in order or arranged the least and greatest numbers correctly. The student provided some explanation of *ten times*.	The student arranged three or four numbers correctly but was unable to articulate the relationship of the two smallest numbers using the words *ten times*.	The student correctly: ▪ Arranged the numbers in the following order: 4,450; 44,500; 504,054; 505,045. ▪ Used the words *ten times* to describe the relationship between 4,450 and 44,500.

A Progression Toward Mastery				
2 **4.NBT.2**	The student correctly answered one problem.	The student correctly answered two problems.	The student correctly answered three problems.	The student correctly answered all four problems: a. >￼ b. < c. < d. =
3 **4.NBT.1** **4.NBT.2** **4.NBT.3**	The student correctly answered one part or was able to answer some parts with partial accuracy.	The student correctly answered two of the five parts.	The student correctly answered three or four of the five parts but was unable to reason in Part (e).	The student correctly answered all five problems: a. 925,420 b. 90,000 + 2,000 + 500 + 40 + 2. Ninety-two thousand, five hundred forty-two. c. Draws two number lines showing the number rounded to 90,000 and 93,000. d. 90,000 < 93,000 e. Explains rounding to the nearest thousand is more accurate because rounding to a smaller unit gives a more accurate estimate, so the difference will be closer to the exact number.

Name _____Jack_____   Date _____

1.

    a.   Arrange the following numbers in order from least to greatest.

      504,054   4,450   505,045   44,500

      4,450   44,500   504,054   505,045

    b.   Use the words "ten times" to tell how you ordered the two smallest numbers using words, pictures and numbers.

      44,500 is ten times 4,450 so it comes after 4,450 when going from smallest to greatest.

      TTh | Th | H | T | O

      4 | 4 | 5 | 0 | 0
      4 | 4 | 5 | 0 | 0

      Because 44,500 is ten times 4,450, the digits shift left one place value.

2.   Compare using >, <, or =. Write your answer inside the circle.

    a.   1 hundred thousand   ⊙ >   10,000

      100,000

    b.   200 thousands 4 hundreds   ⊙ <   204,000

      200,400

    c.   7 hundreds + 4 thousands + 27 ones   ⊙ <   6 thousands + 4 hundreds

      4,727   6,400

    d.   1,000,000   ⊙ =   10 hundred thousands

3. The football stadium at Louisiana State University (LSU) has a seating capacity of 92,542.

   a. According to the 2010 census, the population of San Jose, CA was approximately ten times the amount of people that LSU's stadium can seat. What was the population of San Jose in 2010?

100Th	10Th	Th	H	T	O
	9	2	5	4	2
9	2	5	4	2	0

   The population of San Jose is 925,420. because that is ten times 92,542.

   b. Write the seating capacity of the LSU stadium in words and in expanded form.

   90,000 + 2,000 + 500 + 40 + 2
   Ninety-two thousand five hundred forty-two.

   c. Draw two separate number lines to round the LSU stadium's seating capacity to the nearest ten thousand and to the nearest thousand.

   Ten Thousands
   — 100,000
   — 92,542
   — (90,000)

   Thousands
   — (93,000)
   — 92,542
   — 92,000
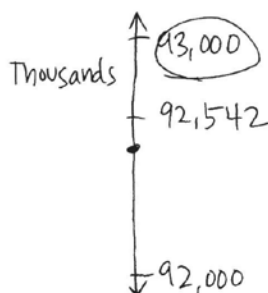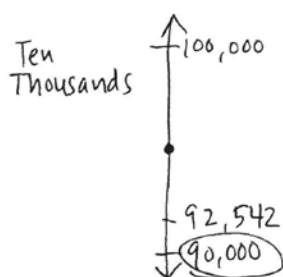
   d. Compare the stadium's seating rounded to the nearest ten thousand and the seating rounded to the nearest thousand using >, <, or =.

   90,000 < 93,000

   e. Which estimate (rounding to the nearest ten thousand or nearest thousand) is more accurate? Use words and numbers to explain.

   Rounding to the nearest thousands is more accurate because the actual number, 92,542, is closer to 93,000 than 90,000. Rounding to a smaller place value is more accurate because it will be closer to the actual number. That's why for this problem, rounding to the thousands gave me an estimate closer to the actual number than rounding to the ten thousands.

EUREKA MATH™

engage^ny

Name _____   Date _____

1. Compare the values of each 7 in the number 771,548. Use a picture, numbers, or words to explain.

2. Compare using >, <, or =. Write your answer inside the circle.

   a.   234 thousands + 7 ten thousands   ◯   241,000

   b.   4 hundred thousands – 2 thousands   ◯   200,000

   c.   1 million   ◯   4 hundred thousands + 6 hundred thousands

   d.   709 thousands – 1 hundred thousand   ◯   708 thousands

3. Norfolk, VA, has a population of 242,628 people. Baltimore, MD, has 376,865 more people than Norfolk. Charleston, SC, has 496,804 less people than Baltimore.

   a. What is the total population of all three cities? Draw a tape diagram to model the word problem. Then, solve the problem.

   b. Round to the nearest hundred thousand to check the reasonableness of your answer for the population of Charleston, SC.

   c. Record each city's population in numbers, in words, and in expanded form.

d. Compare the population of Norfolk and Charleston using >, <, or =.

e. Eddie lives in Fredericksburg, VA, which has a population of 24,286. He says that Norfolk's population is about 10 times as large as Fredericksburg's population. Explain Eddie's thinking.

End-of-Module Assessment Task **Standards Addressed**	**Topics A–F**

Use the four operations with whole numbers to solve problems.

4.OA.3   Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Generalize place value understanding for multi-digit whole numbers.

4.NBT.1   Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. *For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.*

4.NBT.2   Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

4.NBT.3   Use place value understanding to round multi-digit whole numbers to any place.

Use place value understanding and properties of operations to perform multi-digit arithmetic.

4.NBT.4   Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Evaluating Student Learning Outcomes

A Progression Toward Mastery is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left (Step 1) to right (Step 4). The learning goal for students is to achieve Step 4 mastery. These steps are meant to help teachers and students identify and celebrate what the students CAN do now and what they need to work on next.

A Progression Toward Mastery

Assessment Task Item and Standards Addressed	STEP 1 Little evidence of reasoning without a correct answer. (1 Point)	STEP 2 Evidence of some reasoning without a correct answer. (2 Points)	STEP 3 Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer. (3 Points)	STEP 4 Evidence of solid reasoning with a correct answer. (4 Points)
1 **4.NBT.1**	The student provides limited reasoning about the relationship of the values of the 7s.	The student can reason about the relationship between the values of the 7s but does not show a supporting picture or numbers.	The student is able to reason about the relationship of the 7s, but her reasoning does not fully support her picture or numbers.	The student correctly reasons the 7 in the hundred thousands place is 10 times the value of the 7 in the ten thousands place, using a picture, numbers, or words to explain.
2 **4.NBT.2** **4.NBT.4**	The student correctly answers less than two of the four parts.	The student correctly answers two of the four parts.	The student correctly answers three of the four parts.	The student correctly answers all four parts: a. > b. > c. = d. <
3 **4.NBT.1** **4.NBT.2** **4.NBT.3** **4.NBT.4** **4.OA.3**	The student correctly answers less than two of the five parts.	The student correctly answers two of the five parts.	The student answers four or five of the five parts correctly but with only some reasoning in Parts (b) and (e). OR The student answers three or four of the parts correctly with solid reasoning for all parts.	The student correctly answers all five parts: a. 984,810. b. The population of Baltimore is about 600,000. The population of Charleston is about 500,000 less than Baltimore, or 100,000. Therefore, 122,689 is a reasonable answer. c. Charleston, SC: One hundred twenty-two thousand, six hundred eighty-nine. 100,000 + 20,000 + 2,000 + 600 + 80 + 9.

A Progression Toward Mastery

				Baltimore, MD: Six hundred nineteen thousand, four hundred ninety-three. 600,000 + 10,000 + 9,000 + 400 + 90 + 3. Norfolk, VA: Two hundred forty-two thousand, six hundred twenty-eight. 200,000 + 40,000 + 2,000 + 600 + 20 + 8.
				d. Norfolk: 242,628 > Charleston, 122,689.
				e. Eddie is correct to think that Norfolk's population is about 10 times that of Fredericksburg's because Norfolk's population is about 240,000, while Fredericksburg's is about 24,000. 240,000 is ten times as many as 24,000.

Name __Jack__   Date _____

1. Compare the values of each 7 in the number 771,548. Use a picture, numbers, or words to explain.

The 7 in the hundred thousands place is ten times the value of the 7 in the ten thousands place.

$$10 \times 70{,}000 = 700{,}000$$

hundred thousands	ten thousands	thousands	hundreds	tens	ones
7	7	1	5	4	8
7	0	0	0	0	0
	7	0	0	0	0
		1	0	0	0
			5	0	0
				4	0
					8

2. Compare using >, <, or =. Write your answer inside the circle.

   a. 234 thousands + 7 ten thousands (>) 241,000

   $$234{,}000$$
   $$+ \ \ 70{,}000$$
   $$\overline{304{,}000}$$

   b. 4 hundred thousands – 2 thousands (>) 200,000

   $$\overset{3 \ \ 8 \ 6}{400{,}000}$$
   $$- \ \ \ \ 2{,}000$$
   $$\overline{398{,}000}$$

   c. 1 million (=) 4 hundred thousands + 6 hundred thousands

   $$400{,}000$$
   $$+ \ 600{,}000$$
   $$\overline{1{,}000{,}000}$$

   d. 709 thousands – 1 hundred thousand (<) 708 thousands

   $$709{,}000$$
   $$-100{,}000$$
   $$\overline{609{,}000}$$

3. Norfolk, VA has a population of 242,628 people. Baltimore, MD has 376,865 more people than Norfolk. Charleston, SC has 496,804 less people than Baltimore.

   a. What is the total population of all three cities? Draw a tape diagram to model the word problem. Then solve the problem.

   Norfolk | 242,628 | 376,865

   Baltimore | _____ |

   Charleston | _____ |

   496,804

   Baltimore
   $$242,628$$
   $$+\ 376,865$$
   $$\overline{619,493}$$
   ?

   Charleston
   $$\begin{array}{r} 5\,18\,14\,8\,13 \\ \cancel{619,493} \\ -\ 496,804 \\ \hline 122,689 \end{array}$$

   $$\begin{array}{r} 242,628 \\ 619,493 \\ +\ 122,689 \\ \hline 984,810 \end{array}$$

   The total population of all three cities is 984,810.
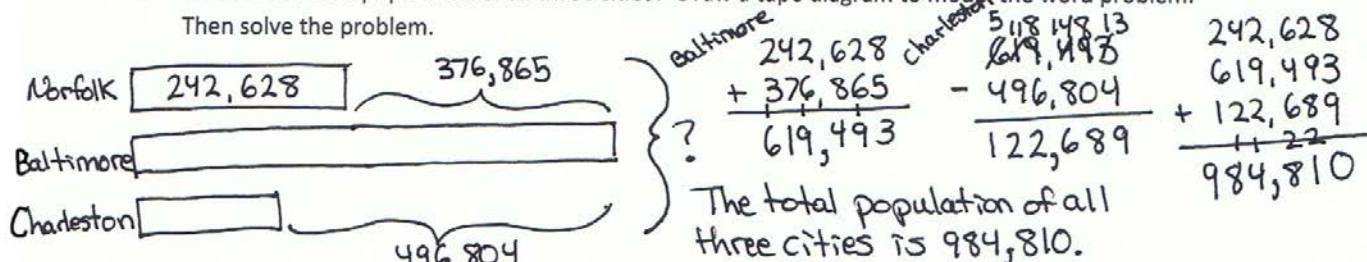
   b. Round to the nearest hundred thousand to check the reasonableness of your answer for the population of Charleston, SC.

   Baltimore's population rounded to the nearest hundred thousand is 600,000 Charleston's population is about 500,000 less than Baltimore's population 600,000 – 500,000 = 100,000. The answer of 122,689 for the population of Charleston is reasonable because 122,689 rounded to the nearest hundred thousand is 100,000.

   c. Record each city's population in numbers, in words, and in expanded form.

   Baltimore: 619,493 Six hundred nineteen thousand, four hundred ninety-three
   600,000 + 10,000 + 9,000 + 400 + 90 + 3

   Norfolk: 242,628 two hundred forty-two thousand, Six hundred twenty-eight
   200,000 + 40,000 + 2,000 + 600 + 20 + 8

   Charleston: 122,689 One hundred twenty-two thousand, Six hundred eighty-nine
   100,000 + 20,000 + 2,000 + 600 + 80 + 9

   d. Compare the population of Norfolk and Charleston using >, <, or =.
   Norfolk   Charleston
   242,628 > 122,689

   e. Eddie lives in Fredericksburg, VA, which has a population of 24,286. He says that Norfolk's population is about 10 times as large as Fredericksburg's population. Explain Eddie's thinking.

   Eddie's thinking is correct because Norfolk's population is 242,628 which can be rounded to 240,000. Fredericksburg's population can be rounded to 24,000. 240 thousands is ten times as large as 24 thousands.

H Th.	T Th.	Th.	H	T	O
	2	4	0	0	0
2	4	0	0	0	0

Module 1:   Place Value, Rounding, and Algorithms for Addition and Subtraction