Kansas Formative Assessment Lesson Title: Place Value Rumble!

CCSS.Math.Content.2.NBT.A.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Grade Level: Grade 2   **Lesson Materials: music, worksheets, # cards provided and booklets**   **Lesson Duration: 1-2 days**

SBAC Formative Assessment Attribute	Dimension	Description
Clarify Intended Learning	Learning Goals/Targets (Common Core)	TSW: 1. Explain a process for determining whether a three-digit number is greater than, less than or equal to another three-digit number. 2. Determine when a three-digit number is greater than, less than or equal to another three-digit number, and record the comparison using the symbols >, <, and =.
	Success Criteria	I can… 1. Explain how a digit's position can affect its value. 2. Line up with my classmates from least to greatest with a 3-digit number card in hand. Once lined up, I can use the correct comparison terminology to compare my number to other classmates' numbers. 3. Record correct inequality symbols (>, < and =) when asked to compare numbers with up to 3-digits on paper.
Elicit Evidence With Evidence-Gathering Strategies.	Tasks and Activities	TSW: Task 1: First compare 1-digit numbers, then 2-digit numbers and 3-digit numbers using Worksheet 1. Connect their understanding of one-digit numbers to two-digit numbers and lastly, make connections to three-digit numbers. This worksheet will require students to record the value of base ten pictures for each set of numbers before writing the comparison symbol. Students will then with a partner, team or the class explaining what they do in order to find out which number is larger. Have the students use the terms greater than, less than and equal to when they discuss and check the recording of their symbols. Ask, "How did you decide which number was larger when they had the same number of tens or hundreds?" This worksheet (Worksheet 1) can be displayed on a Smartboard and used to guide class discussion. • 1 compared to 9 • 79 compared to 73 • 264 compared to 232

Task 2: Next, students will receive a 3-digit number card. Once everyone has a number card, they will partner up and compare their number with another students' card using the sheet provided (Worksheet 2). The teammates will trade cards after they've compared and find a new partner to compare with. Comparisons continue until their sheet is filled or time is up.

My number	Inequality Symbol	My partner's number

Task 3: Third, the teacher will make sure each child is holding a 3-digit card in their hands. There are four place value decks. A mixture of deck A-D would be perfect. If this would be too difficult, start with a combination of easy decks.

- Standard form…i.e. 364 (Deck A…36 cards)
- 3 hundreds, 5 tens and 7 ones (Deck B…24 cards)
- Base ten picture (Deck C…12 cards)
- Expanded form 300+50+7 (Deck D…12 cards)

The teacher will start some music. The students can slowly dance around the room until the music stops. Some classroom appropriate song choices might include:

- "Best Years of Our Lives" *from Shrek* The Baha Men
- "Fun Fun Fun" The Beach Boys
- "I Like to Move It" from *Madagascar* The Party Cats
- "Friend Like Me" from *Aladdin* by Alan Menken
- *"*Colors of the Wind*"* from *Pocahontas* by *Stephen Schwartz*
- "Circle of Life" from *Lion King* by Elton John and Tim Rice

When the music stops the students need to quickly line up in a designated area of the room. Their line should be from least to greatest. To make this more difficult, the teacher can differentiate by not allowing students to talk, but only giving non-verbal signals to one another. Once in line the teacher can guide discussion.

- Hold up your card if it is larger than _____.
- Hold up your card if it is equal to _____.
- Show me a three-digit number with a _____ in the hundreds place but is smaller than _____.
- Show me a numbers that are greater than _____.
- Show me numbers that are less than _____.
- Show me three-digit number that is even and larger than _____.

		• Ask students to read their numbers orally. Remind them not to use "and" between the tens and ones. Task 4: Once the initial activities are completed, students can complete the Place Value Rock booklet enclosed. This is an extension activity and also a chance to see how well students understand 3-digit number comparison. Have base ten manipulatives available to students during this exercise. Some non-standard representations are provided once again to challenge students. The following are ways to use this booklet. • Hand one booklet to each child to complete. • Print out only the pages you like for each child. • Print out booklets for teams/partners to share. • Note: This is when you can work with students who struggle with the concept. Move them to the back table with you and make them show you using the manipulatives. Help them with their inequality wording.
	Questioning Strategies -Key Misconceptions -Questioning Strategies	Essential guiding questions: 1. How does a digit's position affect its value? 2. Can you explain to a classmate why one 3-digit number is <,> or = to another 3-digit number? Key Misconceptions: 1. If students are having difficult comparing numbers by using the symbols, avoid over emphasis on mnemonics. Ask the students to build the number using base ten materials and compare the numbers by looking at the blocks. Then, slowly move to the abstract representation.
	Self-Assessment	Worksheet 3 is available for student self-assessment. Students will give themselves a self-rating for how well they were able to: Line up with their number in order from least to greatest. Use inequality symbols (>,< and =) when comparing numbers. Work with teammates and talk about 3 digit numbers. Use base ten blocks to explain a digit's value
	Individualized Descriptive Feedback -Written -Oral	Task 4: Grade each student's Place Value Rumble Booklet. Leave a star on the pages that they've completed correctly. Circle the problems the student got incorrect. If students are unable to make their corrections themselves, pull them to the back table where the manipulatives are available. There is a section at the bottom of the student self-assessment for teacher

		feedback. This is your chance to write a note to the student and/or their parents.
	Peer-Assessment	During Task 2: Model descriptive feedback for students to share with one another such as: • "That was a great explanation of why your number was smaller or larger than mine. Thanks for being my partner." • "Can you show me why your number is larger than mine." • "I disagree with your comparison because…" During Task 3: Ask students. "Are the people next to you in the correct space. Does the person to your left have a smaller number than yours? Does the person to your right have a larger number than yours?"
Act on Evidence	Use of Evidence to Inform Instruction -Instructional Modifications -Scaffolding or Independent Learning	Modifications for differentiation purposes could include: Line up ideas… • Provide only one type of card to line up with (i.e. standard form only) Booklet ideas… • The booklet pages progress from easy difficulty to harder difficulty. Use the pages that your students are ready for provided the correct supports. • Work with a small team at the back table and have manipulatives available for those who need the visual and tactile experience. • Work through some of the booklet pages on a Smartboard or within teams if students are unable to complete this activity independently. For enrichment extension teachers can also move to slightly harder tasks: • Provide students with 4 and 5 digit numbers to compare. • Ask questions like, "What number is 300 more than 178?" • "Can you draw a number that is twice as large as 178?" • Compare non-standard representations of 3-digit representations. For example, "Which is greater: 5 hundreds, 7 tens, and 3 ones or 2 hundreds, 23 tens, and 7 ones?"
	Collaboration	Students collaborate as they complete the classroom line up, pair up to compare their numbers and work within the booklets. Working together allows them to verbalize and use the key words: greater than, less than and equal to.
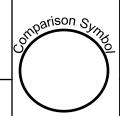
Worksheet 1: Task 1

Which number is larger and why?
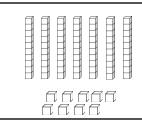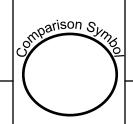
Write the number shown with base ten in this box.

Comparison Symbol
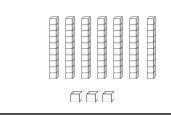
Write the number shown with base ten in this box.
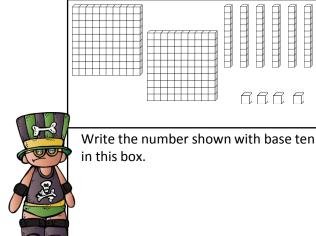
Which number is larger and why?

Write the number shown with base ten in this box.

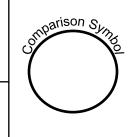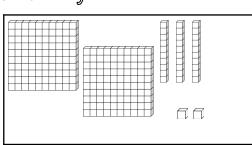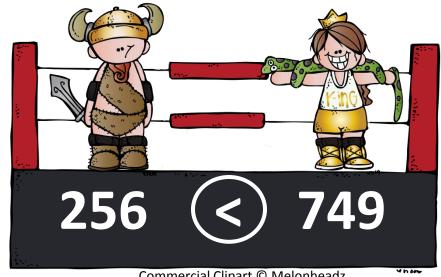*Comparison Symbol*

Write the number shown with base ten in this box.

Which number is larger and why?
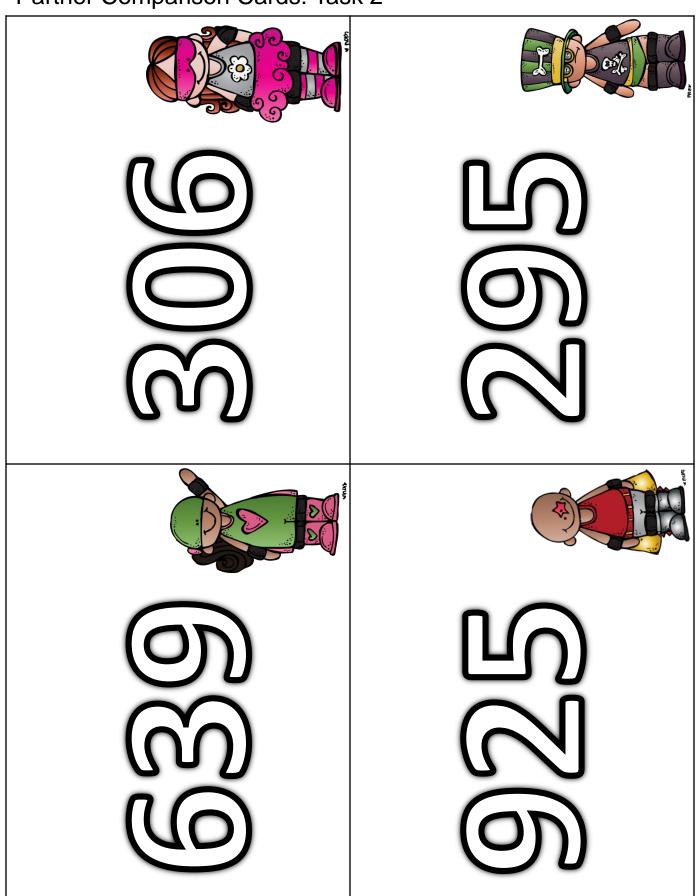
Write the number shown with base ten in this box.

Comparison Symbol

Write the number shown with base ten in this box.

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Worksheet 2: Task 2

WANNa WRESTLE?

My number	Comparison	My partner's number

Instructions: Grab a # card. Match up with a partner. Compare your number to theirs. Discuss why your number is greater or less than theirs. Switch cards. Then compare your new number to a new partner's card. Continue until your page is filled or time is up.
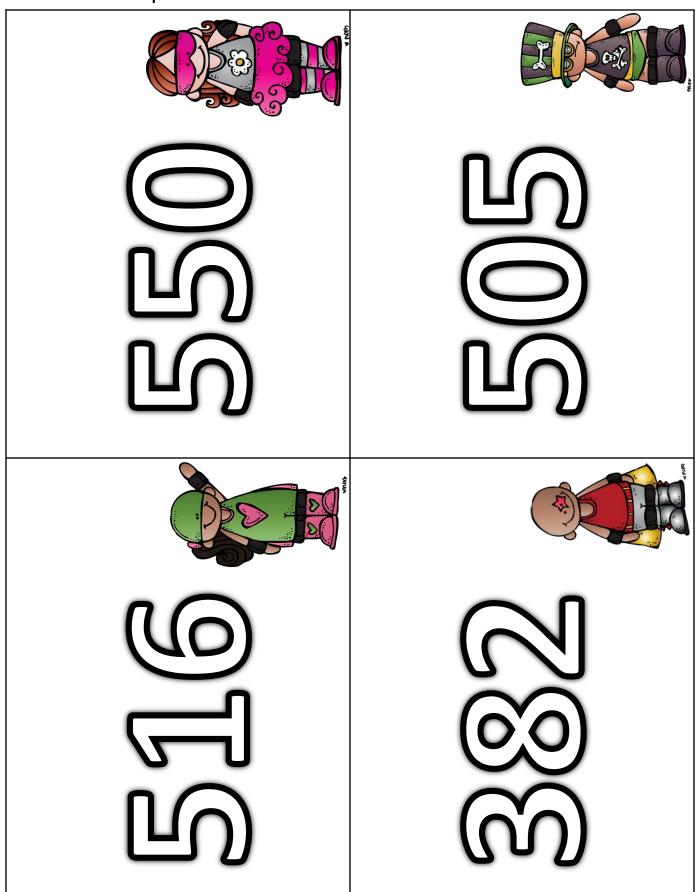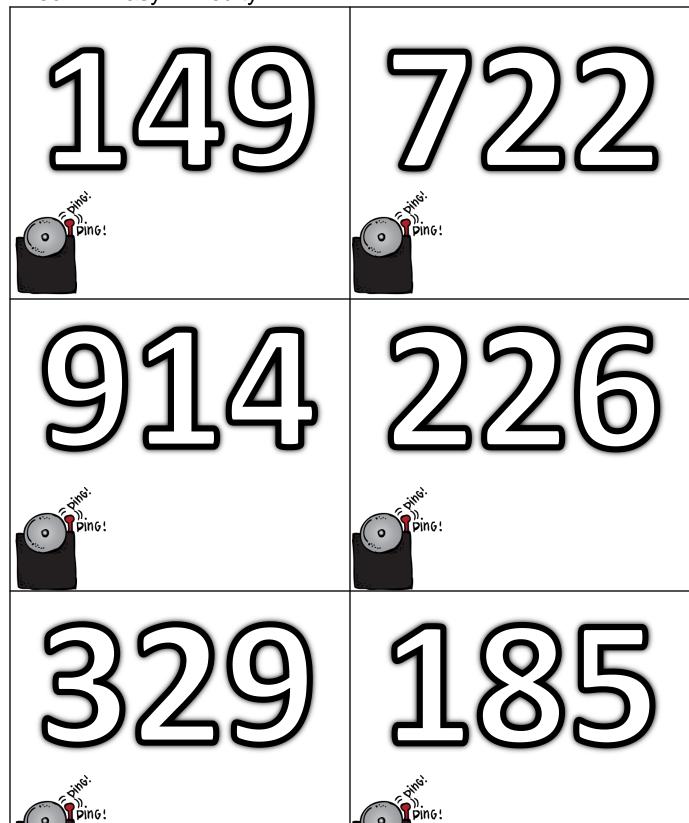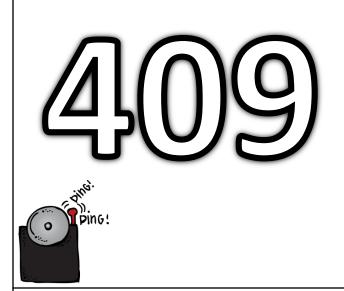
256 < 749
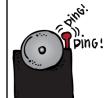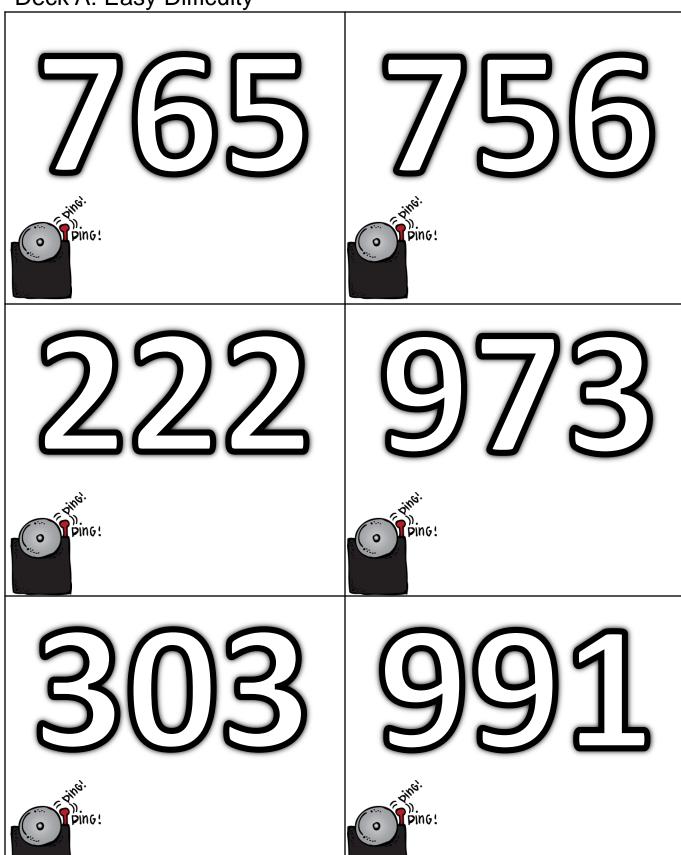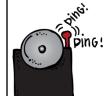
354

334

335

318

306

295

639

925

874

4968

528

4489

205

194

149

309

220

801

613

863

715

157

916

838

114T

345

206

735

550

505

516

382

149

722

914

226

329

185

409

257

212

325

770

805

765	756
222	973
303	991

113	277
276	388
666	545

113	277
276	388
666	545

191

425

662

309

674

225
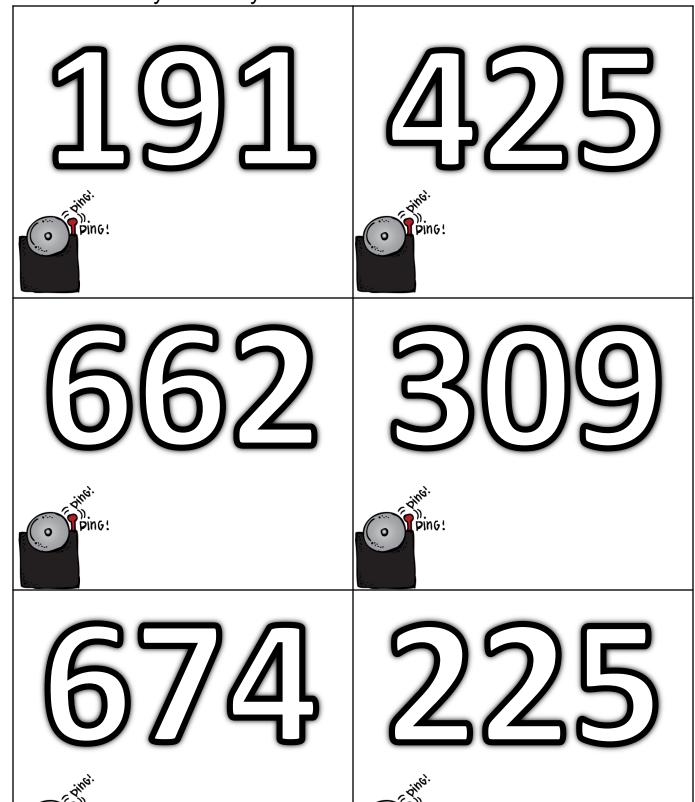
3 hundreds, 5 tens and 7 ones	6 hundreds, 4 tens and 0 ones
5 hundreds, 5 tens and 7 ones	6 hundreds, 1 tens and 3 ones
9 hundreds, 1 tens and 8 ones	5 hundreds, 3 tens and 3 ones

8 hundreds, 6 tens and 9 ones	1 hundreds, 1 tens and 1 ones
4 hundreds, 0 tens and 5 ones	5 hundreds, 0 tens and 4 ones
1 hundreds, 9 tens and 8 ones	2 hundreds, 3 tens and 2 ones

7 hundreds, 6 tens and 7 ones	1 hundreds, 4 tens and 1 ones
2 hundreds, 2 tens and 5 ones	6 hundreds, 1 tens and 4 ones
7 hundreds, 2 tens and 8 ones	2 hundreds, 3 tens and 3 ones
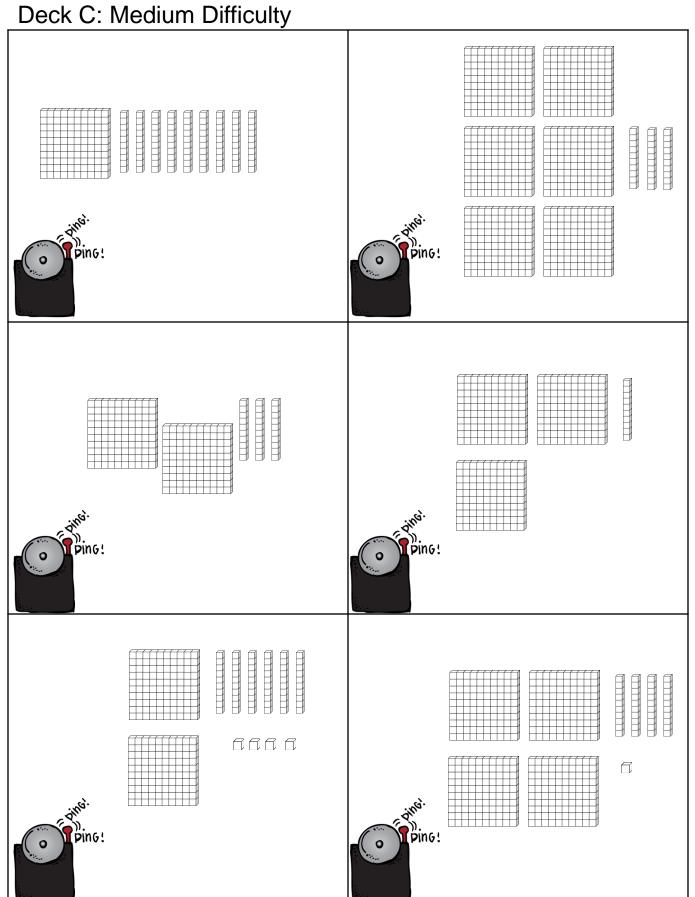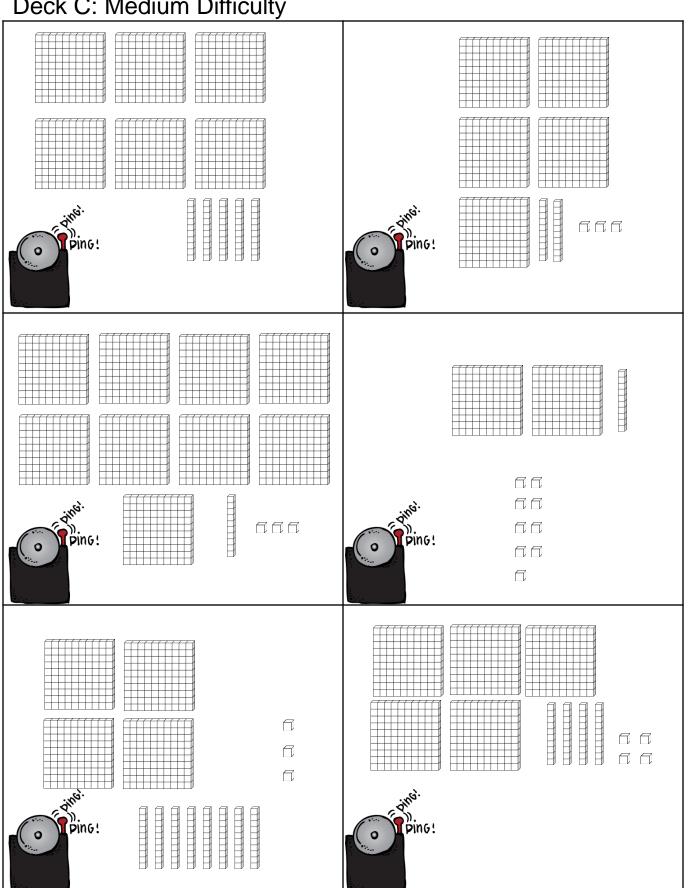
2 hundreds, 1 tens and 5 ones

3 hundreds, 4 tens and 8 ones

9 hundreds, 2 tens and 2 ones

3 hundreds, 2 tens and 4 ones

7 hundreds, 0 tens and 4 ones

5 hundreds, 1 tens and 3 ones

Task 3: Number Line Up
Deck C: Medium Difficulty

200+90+9	400+20+2
100+30+3	700+50+6
700+10+8	500+50+5

300+90+4	200+60+7
100+10+1	900+30+9
600+50+3	200+80+6

Worksheet 3: Self-Assessment

Student Name:

I can…	This skill is easy for me.	This skill is sometimes easy for me.	This skill is difficult for me.
Line up with my number in order from least to greatest.			
Use inequality symbols (>,< and =) when comparing numbers.			
Work with teammates and talk about 3 digit numbers.			
Use base ten blocks to explain a digit's value.			

Teacher comments:

ARE YOU READY TO RUMBLE ?

My Place Value Booklet
2.NBT.A.4

Compare two three-digit numbers based on meanings of
the hundreds, tens, and ones digits, using >, =, and <
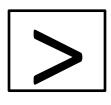symbols to record the results of comparisons.

Student Name: _____

Date: _____

Time: _____
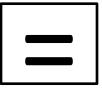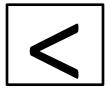

Connect the symbol with its meaning by drawing lines.

>

Equal to
This symbols is used to compare two numbers and is used when both numbers have the same size and value.

=

Less than symbol
This symbols is used to compare two numbers when the first number is smaller than the second number.

<

Greater than symbol
This symbols is used to compare two numbers when the first number is larger than the second number.

Connect the symbol with its meaning by drawing lines.

>

Equal to
This symbols is used to compare two numbers and is used when both numbers have the same size and value.
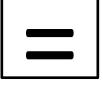
=

Less than symbol
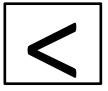This symbols is used to compare two numbers when the first number is smaller than the second number.

<

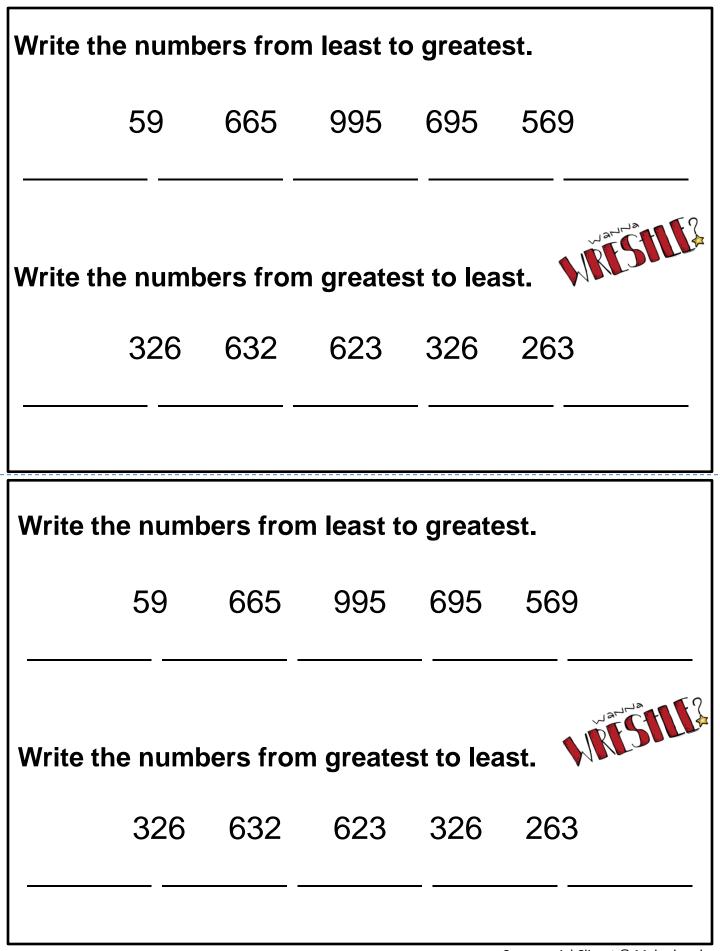**Greater than symbol**
This symbols is used to compare two numbers when the first number is larger than the second number.

Record the comparison using the symbols >, <, and =.

567 _____ 456   505 _____ 124

433 _____ 48   828 _____ 828

333 _____ 333   101 _____ 107

526 _____ 987   612 _____ 610

67 _____ 764   99 _____ 999

Write the numbers from least to greatest.

59   665   995   695   569

_____ _____ _____ _____ _____

Write the numbers from greatest to least.

326   632   623   326   263

_____ _____ _____ _____ _____

WANNA WRESTLE?

Write the numbers from least to greatest.

59   665   995   695   569

_____ _____ _____ _____ _____

Write the numbers from greatest to least.

WANNA WRESTLE?

326   632   623   326   263

_____ _____ _____ _____ _____

Use all three digits to create a 3-digit number.

4, 8, 1

What is the greatest number you can make using all of the digits?

_____

What is the smallest number you can make using all of the digits?

_____

3, 6, 7

What is the greatest number you can make using all of the digits?

_____

What is the smallest number you can make using all of the digits?

_____

Use all three digits to create a 3-digit number.

4, 8, 1

What is the greatest number you can make using all of the digits?

_____

What is the smallest number you can make using all of the digits?

_____

3, 6, 7

What is the greatest number you can make using all of the digits?

_____

What is the smallest number you can make using all of the digits?

_____

**Write a 3-digit number larger than 213,
but smaller than 290. Draw it too!**

hundreds ____ tens ____ ones ____

**Write a 3 digit number with a 1 in the hundreds place.
Make this number odd.**

hundreds ____ tens ____ ones ____

**Write a 3-digit number larger than 213,
but smaller than 290. Draw it too!**

hundreds ____ tens ____ ones ____

**Write a 3 digit number with a 1 in the hundreds place.
Make this number odd.**

hundreds ____ tens ____ ones ____

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Lydia had to compare two wrestlers' number of practice days to predict who might win the next competition. Did Lydia use the right inequality symbol? Please explain.

Mo Madness   vs.   Guy Geronimo

200 + 20 + 3   (<)   300 + 20 + 2

Lydia had to compare two wrestlers' number of practice days to predict who might win the next competition. Did Lydia use the right inequality symbol? Please explain.

Mo Madness   vs.   Guy Geronimo

200 + 20 + 3   (<)   300 + 20 + 2

Record the comparison using the symbols >, <, and =.

456 ◯ 5 tens + 6 ones + 4 hundreds

2 hundreds + 3 ones ◯ 2 hundreds + 5 tens + 9 ones

9 tens + 4 hundreds + 2 ones ◯ 924

9 ones + 4 hundreds + 3 ones ◯ 493

3 hundreds + 4 tens ◯ 6 tens + 4 ones + 3 hundred

7 ones + 8 hundreds ◯ 870

1 hundreds + 5 tens ◯ 5 hundreds + 1 tens