

The P. V. Challenge

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Standard: **MCC4.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.

Players: 2-6

Materials: 1 place value mat, 1 per pair
PV Challenge Recording Sheet
Example Sheet
Deck of cards without the face cards, 1 per group (Aces = 1, Jokers are wild)
Greater Than/Less Than Spinner, paper clip, pencil

Directions:

1. The whole group reviews the examples and shares at least 2 things they understand about the game with their partner.
2. Each pair of students puts a place value mat in front of them.
3. One of the players spins the Greater Than/Less Than Spinner and shares which will be created this round.
4. The designated dealer passes one card to each pair.
5. Each pair decides where to put their card in order to create the greatest number or least number possible depending on which was spun.
6. After everyone has placed a card, they may not move them again. The dealer continues handing out cards until all places on each mat have been filled.
7. The pair with the "smallest" or "largest" number wins 2 points.
8. Each pair receives a point if they can read their number correctly and identify a portion of their number. ("My number is 714,965. I have 9 hundreds because there is a 9 in the hundreds place.")
9. 5 points are given to each pair who can write a comparison statement on their whiteboard about the numbers that were created. ("Josie and Eli have a 6 in the hundreds place. We have a 9 in the hundreds place. We have 3 more hundreds than they do.")

Challenge: Place criteria on the number that can be created such as, "The number must be a multiple of 2."

hundred thousands

__00,000

ten thousands

__0,000

thousands

__,000



ones

—

tens

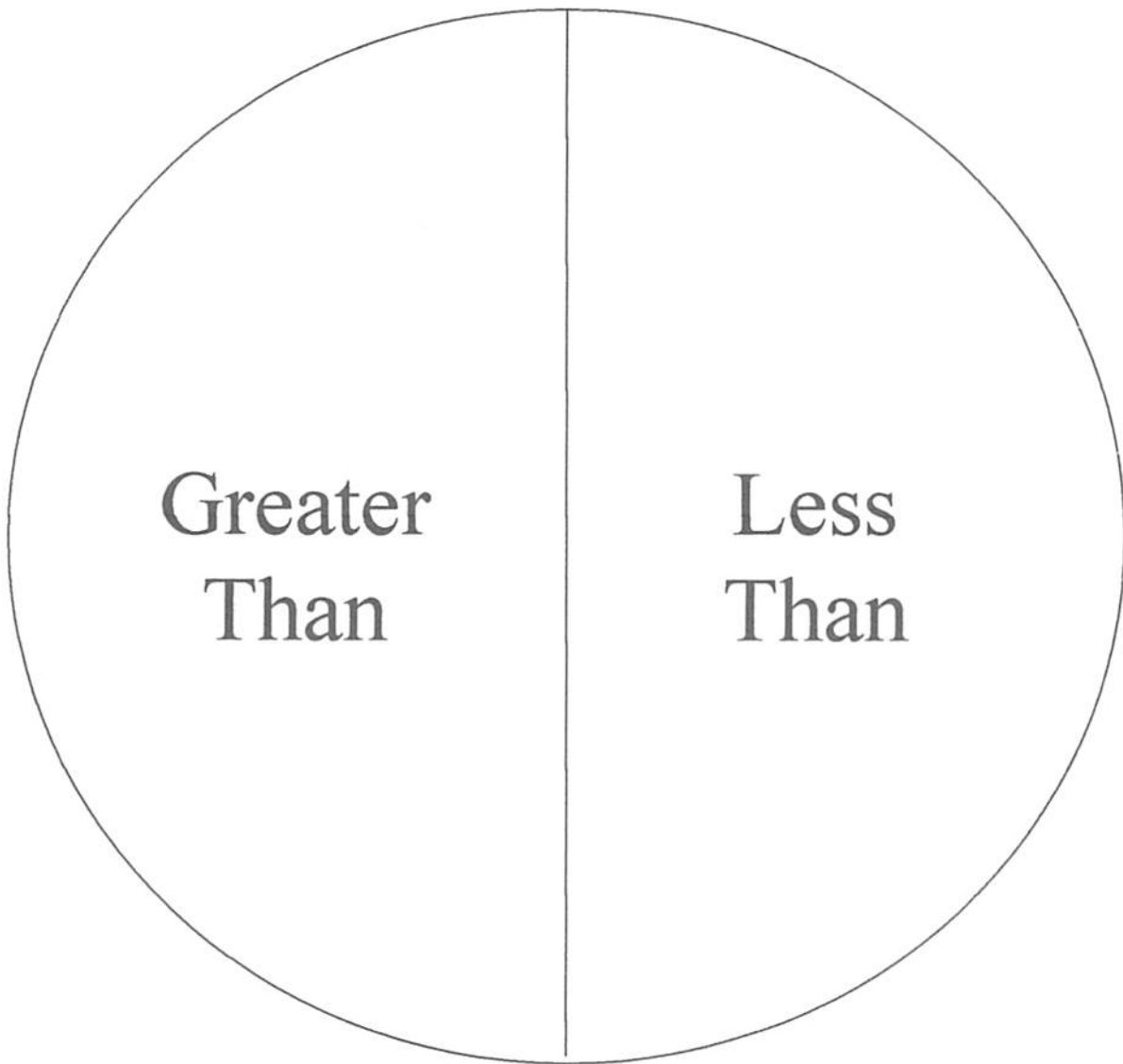
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hundreds

—00

Greater Than/Less Than

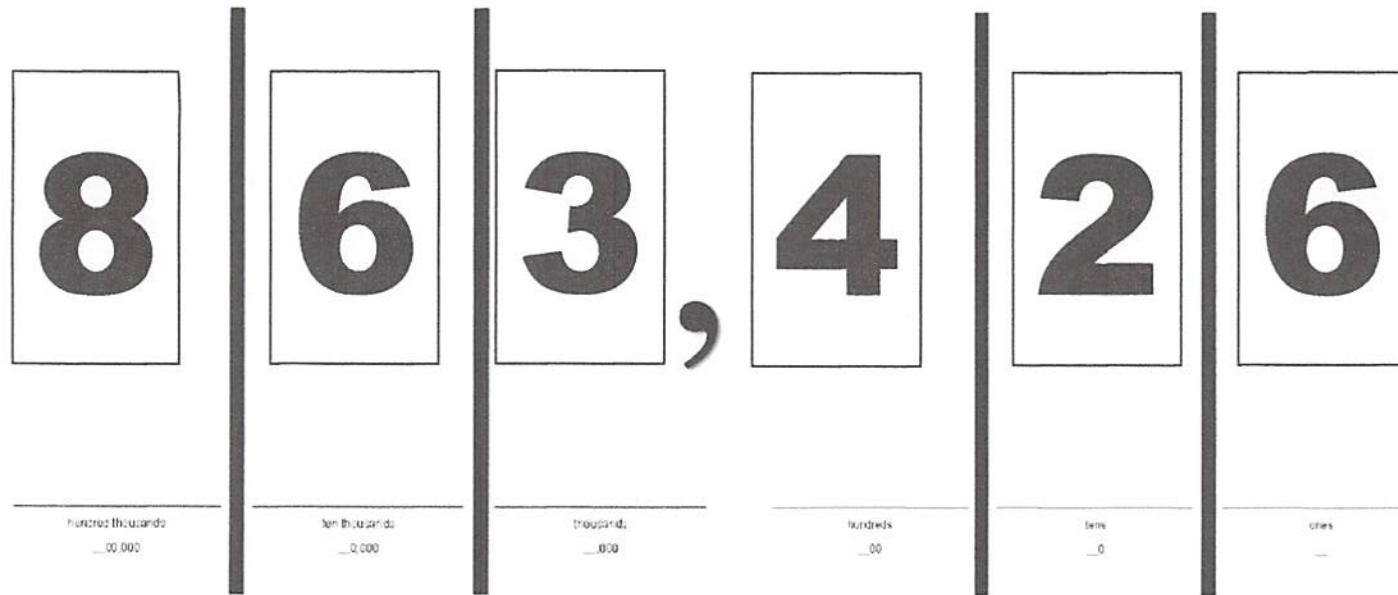
Spinner



Use a paper clip and pencil for spinner.



“The PV Challenge Game” EXAMPLE 1



1. The spinner landed on “Greater Than,” so the cards were to be placed making the greatest number possible.
2. The last digit this pair received was the 8. They were hoping to get a 9, but they thought 8 was pretty good.
3. The pair read their number as “Eight hundred sixty three thousand four hundred twenty-six.”
4. The pair identified the 8 as the digit in the hundred thousand’s place, so they stated, “We have 8 hundred thousands.”
5. The pair next to them got a 9 and put it in the hundred thousand’s place, so they made this comparison statement, “We have an 8 in the hundred thousand’s place, but they have a 9 which is 1 hundred thousand more than we have in the thousand’s place.”
6. On their white board they wrote, $800,000 < 900,000$.
7. This pair received a total of 6 points because they could read their number and they made an accurate comparison statement.

“The PV Challenge Game” EXAMPLE 2

0 10,000 20,000 30,000 40,000 50,000 60,000 70,000 80,000 90,000 100,000

Ten Thousands: 20,000
Thousands: 3,000
Hundreds: 500
Tens: 80
Ones: 9

JOKER

1. The spinner landed on “Less Than,” so the cards were to be placed making the smallest number possible.
2. The first card the pair got was a Joker Card. This card is “wild” and they could make it any number they wanted. Since they are trying to make the smallest number possible, they decided to make this number a 1.
3. The pair read their number as “One hundred twenty-three thousand five hundred eighty-nine.”
4. The pair identified the 9 as the digit in the one’s place, so they stated, “We have 9 ones.” They also added that they were really glad that the 9 wasn’t in the hundred thousand’s place.
5. The pair next to them put a 1 in the one’s place, so they made this comparison statement, “We have a 9 in the one’s place, but they have a 9 fewer ones than we have.”
6. On their white board they wrote, $1 < 9$.
7. This pair received a total of 8 points because they create the smallest number, they could read their number, and they made an accurate comparison statement.

The PV Challenge Recording Sheet

Names _____

Number Created

Comparison

Expanded Form

Number Created

Comparison

Expanded Form

Number Created

Comparison

Expanded Form

Number Created

Comparison

Expanded Form

Number Created

Comparison

Expanded Form

Number Created

Comparison

Expanded Form

Name

Excellentlly Expanded

This number in expanded form is...	1,000 less than this number is...
The value of the underlined digit...	The place value of the underlined digit...

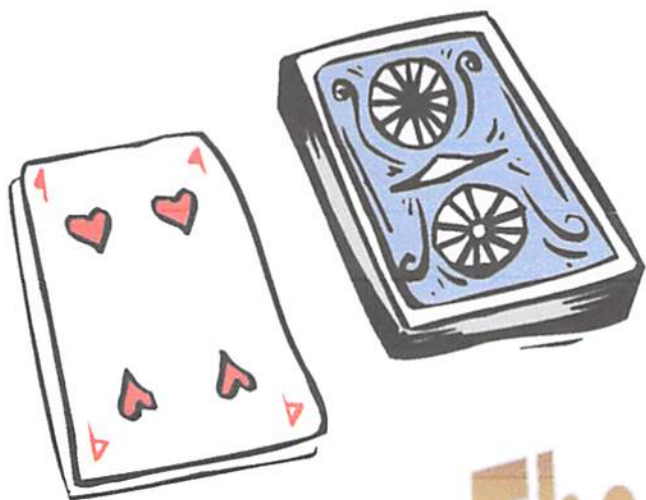
442,099

On the lines below, explain how the manipulative activity, "Excellentlly Expanded" helped you understand expanded form.

PV Challenge

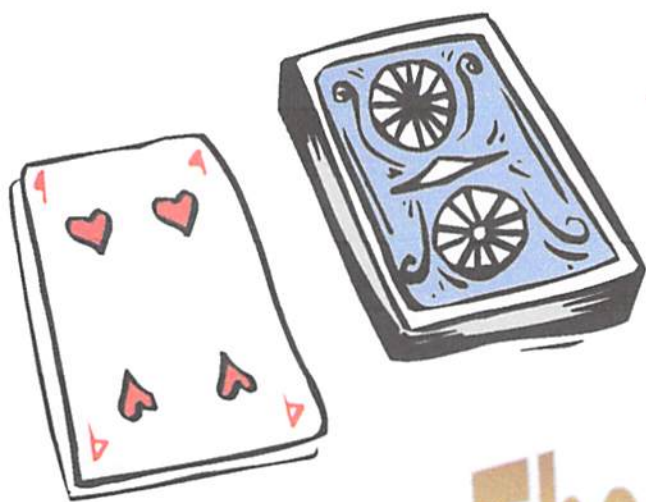
Is this statement true or false? Explain why.

$57 + 23 > 67 + 3$



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