Why do you begin at the left to find the digits that are different? [Sample answer: You begin at the left because those digits have the greatest values.]

Prevent Misconceptions
Students are sometimes confused when they need to compare two numbers that have a different number of digits. They may be inclined to line up the digits from the left. Emphasize that the digits must be lined up according to place value.

Step 2

Find the first place	54<u>5</u>,524
where the digits	54<u>0</u>,828
are different.	

| Compare | 5 > 0 |

Think 5 thousands > 0 thousands

So, 545,524 > 540,828. Nashville has a greater population than Charlotte.

Lee started comparing the numbers by looking at the ones place. He concluded that because 8 > 4, the number, 540,828 must be the greater number. What is wrong with his reasoning? [Lee looked just at the ones place for both numbers. Ones have less value than thousands. You need to compare the digits having the greatest place value first.]

Step 1

Line up the places.   545,524
                         540,828

Begin at the left.
Compare.

Use > for greater than.
Use < for less than.

Step 2

Find the first place	54<u>5</u>,524
where the digits	54<u>0</u>,828
are different.	

| Compare | 5 > 0 |

Think 5 thousands > 0 thousands

So, 545,524 > 540,828. Nashville has a greater population than Charlotte.

Guided Practice*

Do you know HOW?

Copy and complete. Write <, > or = for each ◯.

1. 9,445,000 ◁ 10,000,000

2. 496,256,001 ▷ 496,155,001

3. 20,003,888,065 ▷ 20,003,868,001

Do you UNDERSTAND?

4. **Writing to Explain** Why do you compare numbers beginning from the left after you line them up by place value? **The numbers on the left have the greatest place value.**

5. In a recent U.S. Census, Long Beach had a population of 491,564 and Fresno had a population of 464,727. Which city has a greater population? **Long Beach**

Independent Practice

Copy and complete. Write <, > or = for each ◯.

6. 3,456 ◁ 3,543

7. 9,999 ◁ 10,000

8. 98,325 = 98,325

9. 789,124 ◁ 789,300

10. 4,701,045,756 ▷ 4,701,045

11. 3,000,010 ◁ 3,000,000,010

12. 29,374,087,210 ▷ 28,124,087,210

13. 13,059 ▷ 9,898

14. 6,012,907,000 = 6,012,907,000

15. 8,937,051 ◁ 8,937,501

16. 1,790,023,901 ▷ 1,090,023,901

17. 45,034,521 ▷ 45,034,251

18. 990,148,632,109 ◁ 990,149,632,109

*For another example, see Set B on page 20.

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2 Guided Practice

Formative Assessment

Tell students that using a place-value chart to compare the numbers will remind them to line up the numbers beginning with the places on the right.

Exercises 1–3
Error Intervention

If students confuse the symbols for greater than and less than,

then draw a large > symbol on the board. Point to the left side of the symbol and say: *Is this side of the symbol greater, or wider, than the right-hand point?* [Yes] *Always remember that the greater of the two numbers always goes next to the greater opening of the symbol.*

Reteaching For another example and more practice, assign **Reteaching** Set B on p. 20.

3 Independent Practice

In Exercise 12, which is the first place value that is different between the numbers? [The billions place] *Which value is greater: the 9 or the 8?* [9]