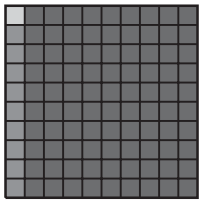
Name _____

Model Place Value Relationships

A hundred grid can help you understand place-value relationships.

- One small square has been shaded to represent 1.
- Shade the rest of the first column. Count the number of small squares. There are 10 small squares. The model for 10 has 10 times as many squares as the model for 1.
- Shade the remaining 9 columns. Count the number of small squares. There are 100 small squares. The model for 100 has 10 times as many squares as the model for 10.
- If you shade ten hundred grids, you will have shaded 1,000 squares. So, the model for 1,000 has 10 times as many squares as the model for 100.



A place-value chart helps you find the value of each digit in a number.

THOUSANDS			ONES		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
		8	5	1	6

In the number 8,516:

The value of the digit 8 is 8 thousands, or 8,000.

The value of the digit 5 is 5 hundreds, or 500.

The value of the digit 1 is 1 ten, or 10.

The value of the digit 6 is 6 ones, or 6.

Find the value of the underlined digit.

1. 7̲56 _____

2. 1,0̲25 _____

3. 4̲,279 _____

4. 3̲5,703 _____

Compare the values of the underlined digits.

5. 7̲00 and 7̲0

The value of 7 in _____ is _____ times the value of 7 in _____.

6. 5̲,000 and 5̲00

The value of 5 in _____ is _____ times the value of 5 in _____.

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Read and Write Numbers

Look at the digit 6 in the place-value chart below. It is in the hundred thousands place. So, its value is 6 hundred thousands .

In **word form**, the value of this digit is six hundred thousands.

In **standard form**, the value of the digit 6 is 600,000.

PERIOD

THOUSANDS			ONES		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
6	5	9,	0	5	8

Read the number shown in the place-value chart.
In word form, this number is written as six hundred fifty-nine thousand, fifty-eight.

You can also write the number in **expanded form**:
600,000 + 50,000 + 9,000 + 50 + 8

Note that when writing a number in words, a comma separates periods.

Read and write each number in two other forms.

1. 40,000 + 1,000 + 300 + 70 + 8

_____

2. twenty-one thousand, four hundred

_____

3. 391,032

_____

_____

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Name _____

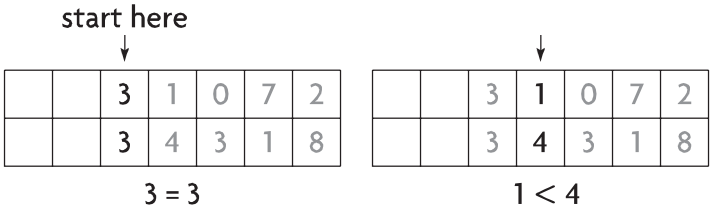
Compare and Order Numbers

Compare 31,072 and 34,318. Write <, >, or =.

Step 1 Align the numbers by place value using grid paper.

Step 2 Compare the digits in each place value. Start at the greatest place.

Are the digits in the ten thousands place the same?
Yes. Move to the thousands place.
Are the digits in the thousands place the same?
No. 1 thousand is less than 4 thousands.



Step 3 Use the symbols <, >, or = to compare the numbers.

< means *is less than.* > means *is greater than.* = means *is equal to.*

There are two ways to write the comparison.

31,072 < 34,318 or 34,318 > 31,072

1. Use the grid paper to compare 21,409 and 20,891. Write <, >, or =.
21,409 ◯ 20,891

Compare. Write <, >, or =.

2. $53,621 ◯ $53,760

3. 82,550 ◯ 80,711

Order from greatest to least.

4. 16,451; 16,250; 17,014

_____

5. 561,028; 582,073; 549,006

_____

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Round Numbers

When you round a number, you replace it with a number that is easier to work with but not as exact. You can round numbers to different place values.

Round 4̲78,456 to the place value of the underlined digit.

Step 1 Identify the underlined digit.
The underlined digit, 4, is in the hundred thousands place.

Step 2 Look at the number to the right of the underlined digit.

If that number is 0–4, the underlined digit stays the same.

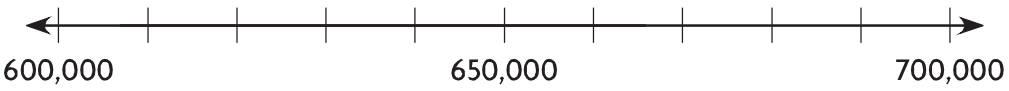
If that number is 5–9, the underlined digit is increased by 1.

The number to the right of the underlined digit is 7, so the underlined digit, 4, will be increased by one; 4 + 1 = 5.

Step 3 Change all the digits to the right of the hundred thousands place to zeros.

So, 478,456 rounded to the nearest hundred thousand is 500,000.

1. In 2010, the population of North Dakota was 672,591 people. Use the number line to round this number to the nearest hundred thousand.



672,591 is closer to _____ than _____,

so it rounds to _____.

Round to the place value of the underlined digit.

2. 3,4̲52 _____

3. 1̲80 _____

4. $7̲2,471 _____

5. 5̲72,000 _____

6. 9̲50 _____

7. 6̲,495 _____

8. 83̲5,834 _____

9. 96,6̲25 _____

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