

Objective 3.1(A): Use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999.



This objective has four parts:

- Use place value to read whole numbers through 999,999;
- Use place value to write, in symbols, whole numbers through 999,999;
- Use place value to write, in words, whole numbers through 999,999; and
- Describe the value of whole numbers through 999,999.

Each part will be addressed in a separate lesson.

Math Vocabulary:

Place Value - the value given to a place a digit occupies in a numeral.

Example: 152 - The underlined digit has a value of 5 tens

Period - a group of digits separated by commas in a written number

Example: 125,687- the underlined digits represent the thousands period in the list of numbers.

TAKS Vocabulary:

Represents - stands for

Example: The 9 in 196 represents 9 tens.

Value - how much a digit is worth in the place it is holding

Example: The value of the 9 in 196 is 9 tens, or 90.

Materials: Paper, Pencil, Transparencies 1 and 2, Student Handout One, and Student Workbook 3.1A

Practice One: Describe the values of whole numbers through 999,999.

Display Transparency One. Review the periods and place values on the chart.



Reproduce place value chart starting with the ones place and ending with the hundred thousands place. This will reinforce the concept that place value increases from right to left.

Explain that a place value chart can be created to assist with determining the value of a digit in a given number. Identify the abbreviations for each place in the chart.

Demonstrate how to use the chart by writing several numbers and identifying the value of each digit. For example, write 25 on the chart. Point out that the 2 is under the "T" on the chart and has a value of 2 tens. Then use the same procedure to identify the value of the 5.

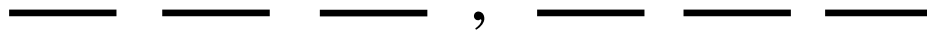
Have students make individual place value charts. Write the number 300 on the board. Have students fill in the number on their place value chart and identify the value of each digit. Continue the exercise, using up to 6-digit numbers.

Activity One

Objective: The student uses place value to read and write numbers in symbols through 999,999.

Materials: Blank transparency, overhead marker, ten-sided number polyhedrons or spinners labeled 0 - 9, pencils, scratch paper

Directions: On the overhead transparency, draw a game board like this one:



Roll the polyhedron or spin the spinner. After each roll or spin, record the result as a digit on one of the spaces on the game board. When the board is full, have students read and say the number that is represented on the board. Students should play several games in pairs, each student using his/her own game board. Assess students' understanding by asking individuals to name the digit in a particular place, to name a digit's value, or to name the number that has been created.



Extension Activity: Try to build the largest number possible by thoughtful placement of the digits on the board. Once a roll or spin result is recorded, that digit cannot be moved. The winner is the one who has the larger number and can read it correctly.

Guided Practice: Display Transparency Two. Work the problem in small groups, then choose one group to demonstrate the solution process, including their plan, the correct solution, and justification of the solution (how they checked it).

Independent Practice: Assign Student Workbook, 3.1A Lesson 4. Those who understand should work alone; use peer- or teacher-tutoring for those who need help. As a whole group, check the problem. Allow students to complete remaining problems. Check as a whole group.

Place Value Chart

We can make a place value chart to help us understand the value of a digit in a number. A place value chart is divided into periods.

Place Value- the value given to a place a digit occupies in a numeral.

Example: 152-The underlined digit has a value of 5 tens or 50.

Period- a group of digits separated by commas in a written number

Example: 125,678 - The underlined digits represent the thousands period in this number. The remaining digits are in the ones period.

Here is a place value chart.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

Here is a shorter way to create a place value chart.

HTh	TTh	Th	,	H	T	O
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First draw six vertical lines, one for each of the places through hundred thousands. Separate the lines into groups of three with a comma. Then label the columns with the abbreviations for the places, beginning with the ones place, and ending with the hundred thousands place. Now use the chart by

filling in one digit per column. You can practice with a friend on the back of this paper.

What is the value of the 6 in 67,482? Mark your answer.

- 6 tens
- 6 ones
- 6 thousands
- 6 ten thousands

HTh	<u>TTh</u>	<u>Th</u>	,	<u>H</u>	<u>T</u>	<u>O</u>
	6	7		4	8	2

Plan:

1. Circle or highlight numbers in the problem and the word "value."
2. Count the number of digits in the whole number.
3. Draw six vertical lines as columns.
4. Separate each group of three lines with a comma.
5. Above the lines, write abbreviations of the place values, starting with the ones and ending with hundred thousands.
6. Write the whole numbers in the problem under the abbreviations.
7. Circle the number 6 and the abbreviation.

Mark your answer. (6 ten thousands)