

MathSmart  
Guide  
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# Chapter 1

## Whole Numbers to 1 000 000

### 1.1 Writing Numbers to 1 000 000

In this unit, your child will be expected to demonstrate an understanding of reading, writing, and representing whole numbers to 1 000 000 in different forms. In order to grasp the concept of the numerical system, your child should use a place value chart to represent large numbers so that he or she can visualize the value of each digit and read numbers in groups of three digits.

#### Numbers in Three Different Forms

e.g. 425 098

- in **Standard Form:** 425 098

Leave a space for every three digits.

- in **Written Form:**

four hundred twenty-five thousand ninety-eight

To write in expanded form, you can expand the place value chart as shown here to see the value of each digit in the number 425 098.

- in **Expanded Form:**

425 098

= 4 hundred thousands + 2 ten thousands + 5 thousands + 9 tens + 8 ones

= 400 000 + 20 000 + 5000 + 90 + 8

\* Your child should be able to convert among the 3 forms.


#### Place Value Chart

Millions			Thousands					
H	T	O	H	T	O	H	T	O
			4	2	5	0	9	8

H = hundreds  
T = tens  
O = ones

4 is in the hundred thousands place; it means 400 000.

There are no "hundreds" in this number. So, "0" is used as a placeholder.



Thousands					
H	T	O	H	T	O
4	0	0	0	0	0
	2	0	0	0	0
		5	0	0	0
				9	0
					8
+					
4	2	5	0	9	8



## 1.2 Comparing and Ordering Whole Numbers

In this unit, your child will learn to use two different methods to compare numbers up to 1 000 000. Make sure your child is confident in applying the concepts learned in the previous unit because this unit builds upon what was previously learned.

### Using a Number Line

- 1st** Mark the numbers on a number line.
- 2nd** The number farthest to the left is the least, while the one farthest to the right is the greatest.

345 397 is farthest to the left and 346 980 is farthest to the right.



**e.g.** Order the numbers from least to greatest.

345 397    346 980    346 253

345 397    346 253    346 980

345 000    346 000    347 000

$345\ 397 < 346\ 253 < 346\ 980$

### Using a Place Value Chart

- 1st** Write the numbers in the place value chart.
- 2nd** Compare the digits farthest to the left. If they are the same, move on to the next digit to the right until they are different.

**e.g.**

Thousands					
H	T	O	H	T	O
3	4	5	3	9	7
3	4	6	9	8	0
3	4	6	2	5	3

↑    ↑    ↑    ↑

same    same

5 is the least, so 345 397 is the least number.

9 is the greatest, so 346 980 is the greatest number.

For numbers that do not have the same number of digits, make sure they are aligned at the ones when comparing.

Thousands					
H	T	O	H	T	O
1	7	2	5	0	4
	2	5	9	4	8

✓

Thousands					
H	T	O	H	T	O
1	7	2	5	0	4
2	5	9	4	8	

✗