LESSON 1 Place Value Through Millions
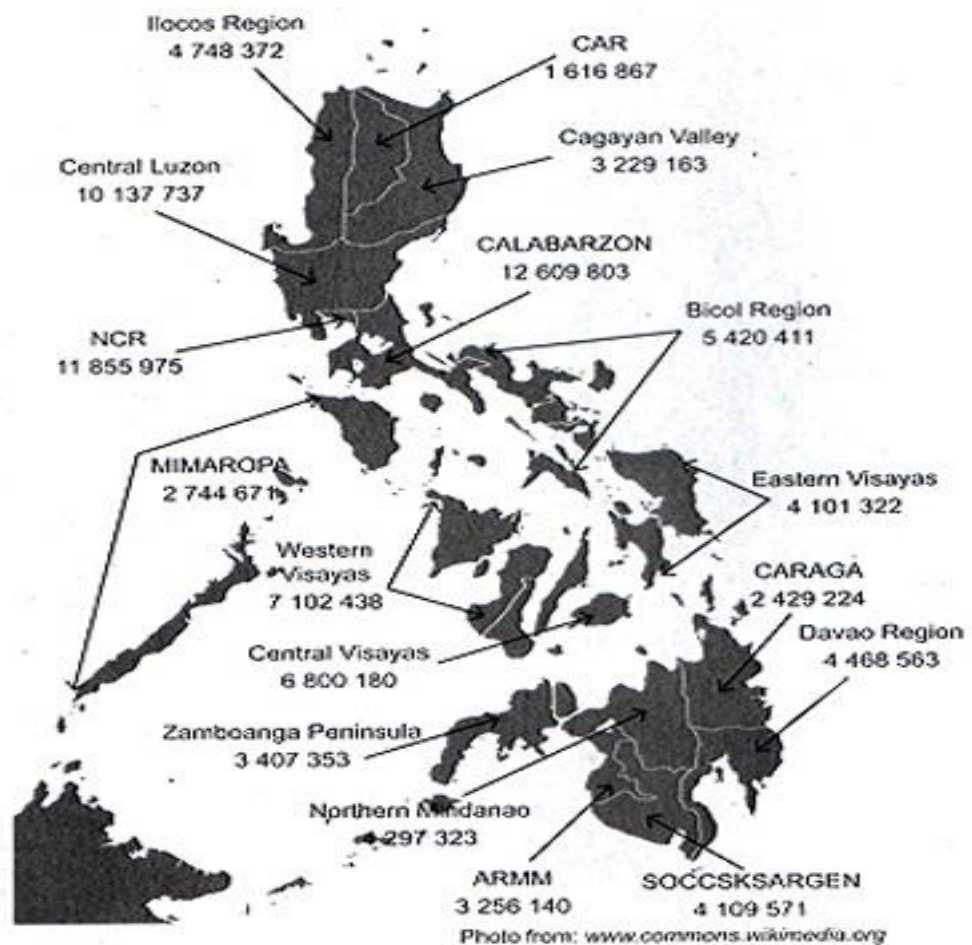
ENGAGE

   The figure below shows the 2010 census of population of the different regions in the Philippines (National Statistics Office official website)

Ilocos Region
4 748 372

CAR
1 616 867

Cagayan Valley
3 229 163

Central Luzon
10 137 737

CALABARZON
12 609 803

Bicol Region
5 420 411

NCR
11 855 975

MIMAROPA
2 744 671

Eastern Visayas
4 101 322

Western Visayas
7 102 438

CARAGA
2 429 224

Davao Region
4 468 563

Central Visayas
6 800 180

Zamboanga Peninsula
3 407 353

Northern Mindanao
4 297 323

ARMM
3 256 140

SOCCSKSARGEN
4 109 571

Photo from: www.commons.wikimedia.org

Based from the given information, answer the following:

1. Which region has the largest population? How do you know that it is the largest?
2. Which region has the smallest population? Why do you say that it is the smallest
3. Can you tell the population of Calabarzon? What about Eastern Visayas
4. How many students are there in your school? Can you imagine how large is the population of the Philippines?

EXPLORE

I. How big is a million?

Can you think of an example that represents millions

Examples:

a.

This home cost more than a million.

b.

The Philippines has a growing number of commuters reaching up to milliom

II. The table below is called a place value chart. Consider the table below and let us answer the question considered above. What do you observe in the chart?

In the place value chart. Noticed that the digit are grouped into sets of three digits. Each group of three digits is called a period. The word 'units', 'thousands' and 'millions' among others, are used to name periods in our numeration system.
For example, what is the value of 9 in the standard form 92337853? What about in the numeral 12609803? Notice that the place value of 9 in the numerals 92337853 is ten millions. Its value is 90 000 000. In 92337853, the place value of the digit of 9 is thousands and its value is 9000.

Which of the two has greater value? Why? Extend the table and write the population of each region. Can you identify the largest and the smallest numbers?

EXPLAIN

Numbers are grouped into periods and are separated by spaces. Each period consist of three digits. Ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions and hundred millions are called place values. Place value refers to the position that a digit occupies in the numerals. The value of digits depends on its place in the numeral. Further, the value of each place is ten times greater than the value of the place to its right. Consider the numeral 21 708 569. What digit and its value is the:

a. hundred thousands place?   _____
b. million place?   _____
c. thousands place?   _____
d. ten millions place?   _____
e. ten thousands place?   _____

By writing each digit in their proper places in the place value chart. We will have

Therefore. in the number 21 708 569.

a. The digit 7 is in the hundred thousands place and its value is 700 000 or 7 hundred thousand.
b. The digit 1 is in the millions place and its value is 1 000 000 or 1 million.
c. The digit 8 is in the thousands place and its value is 8000 or 8 thousand.
d. The digit 2 is in the millions place and its value is 20 000 000 or 20 million.
e. The digit 0 is in the ten thousands place and its value is 0. The digit 0 has zero value but its used as a place holder.