

Mathematics

Quarter 1 – Module 1: Numbers and Number Sense



What I Need to Know

This module was designed and written to help you master the Numbers and Number Sense. The scope of this module can be used in many different learning situations. The language used was adjusted to the diverse vocabulary level of learners. The lessons were arranged chronologically according to the standard sequence of the course. The content of this module corresponds to the textbook you are using.

The module is divided into four lessons, namely:

- Lesson 1- Visualizing numbers from 100 000 with emphasis on 10 001 to 100 000.
- Lesson 2 – Place Value and Value of digits in numbers up to 100 000.
- Lesson 3 - Reading and Writing Numbers up to 100 000 in symbols and in words
- Lesson 4 – Comparing Numbers up to 100 000 using relation symbols

After using this module, you are expected to:

1. Visualize numbers from 10 001 to 100 000. (**M4NS-1a-1**)
2. Value and Place Value. (**M4NS1a-10.1**)
3. Reads and Writes Numbers in symbols and in words up to hundred thousands and compare them using relation symbols. (**M4NS1a-9.1.1**)



What I Know

Read and understand each item, choose your correct answer.

1. What number is 10 000 less than 31 211?
a. 21 200 b. 21 211 c. 21 210 d. 21 201

2. What number is represented by these discs?



- a. 1 500 b. 1 005 c. 1 050 d. 1 006
3. What number has 5 ten thousands, 6 thousands, 7 hundreds, 4 tens and 8 ones?
a. 54 679 b. 56 478 c. 56 748 d. 57 648
4. Encircle the letter of the number with a 5 in the thousands place?
a. 45 304 b. 51 760 c. 76 542 d. 93 227

5. In 92 165, give the value of the digit in the ten thousands place?
a. 20 000 b. 50 000 c. 60 000 d. 90 000

6. The number word for 78 020 is _____.
a. seven eight thousand, twenty
b. seventy-eight thousand, twenty
c. seventy-eight thousand, two hundred
d. seventy-eight thousand, two

7. The number symbol for ninety-nine thousand, twelve is _____.
a. 99 012 b. 909 012 c. 99 102 d. 99 021

8. What symbol should be used to make the equation 23 000_23 006 correct?
a. < b. > c. = d. ≠

9. Which statement is correct?
a. $5 000 > 5 326$ c. $5 328 > 5 303$
b. $5 120 = 5 623$ d. $5 934 < 4 205$

10. The number 89 098 is read as _____.
a. eighty-nine thousand, nine hundred eight
b. ninety-eight thousand, ninety-eight
c. eighty-nine thousand, nine hundred eight
d. eighty-nine thousand, ninety-eight

Lesson

1

Visualizing Numbers up to 100 000 with Emphasis on Numbers 10 001 – 100 000

Hi kids a pleasant day to start with a module! Hope you have fun and enjoy the following activities.

Learning Objectives:

1. Visualize numbers up to 100 000 with emphasis on numbers 10 001 – 100 000
2. Illustrate / Draw a number disc to show the numbers.
3. Use leisure time wisely.



What's In

A. Match Column A with Column B.

Write the letter of the correct answer before the number.

Column A

1.	1 000	100	100	100	100	1	1	1	1	1	1
2.	1 000	1 000	1 000	1 000	100	100	10	10	1		
3.	1 000	100	100	100	10	10	10	1	1		
4.	1 000	1 000	1 000	1 000	1	1	1 000	1 000	1 000		
5.	1	1	100	100	100	100	1 000	1 000	1 000	1 000	

Column B

- | | |
|----------|--|
| a. 1 332 | 1. (1 000, 100, 100, 100, 100, 1, 1, 1, 1, 1) |
| b. 2 405 | 2. (1 000, 1 000, 1 000, 1 000, 100, 100, 10, 10, 1) |
| c. 4 221 | 3. (1 000, 100, 100, 100, 10, 10, 10, 1, 1) |
| d. 7 614 | 4. (1 000, 1 000, 1 000, 1 000, 1, 1, 1 000, 1 000, 1 000) |
| e. 7 002 | 5. (1, 1, 100, 100, 100, 100, 1 000, 1 000, 1 000, 1 000) |
| f. 1 406 | |



What's New

Ian and his friends enjoy watching their favorite football game on television. They are surprised with how big the sport's ground is where this game is being held. They want to know how many people the sports ground could accommodate. So when the announcer announces that 12 645 people watch the game. They are really surprised.

Questions:

1. How do you feel when you have some fun with friends? _____
2. It is good to be friendly? _____
3. Who watched the football game? _____
4. How many people came to watch the game? _____
5. Do you know how big these numbers? _____

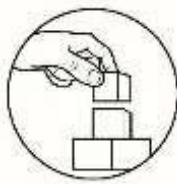


What is It

In visualizing numbers, use logs, blocks, flats, longs, and units, or number discs such as 10 000s, 1 000s, 100s, 10s, and 1s.

Two ways to represent the numbers are shown below.

Using the number discs				
10 000	1 000	1 000	100	100
Using the logs (10 000), blocks (1 000), flats (100), longs (10), and units (1)				
One 10,000	Two 1,000s	Six 100s	Four 10s	Five 1s
10 000	2 000	600	40	5
12 645				



What's More

Let us try to answer more challenging problem and activities about visualizing members from 10 001 to 100 000.

A. Choose the number that is represented by each illustration.

Write the letter of the correct answer before the number.

a. 69265

b. 97685

c. 92 637

d. 88 496

e. 82 394

f. 74 828

- ___ 1.) 8 + + 4 + 9 + 6
- ___ 2.) 6 + + 2 + 6 + 5
- ___ 3.) 8 + + 3 + 9 + 4
- ___ 4.) 9 + + 6 + 8 + 5
- ___ 5.) 7 + + 8 + 2 + 8

B. Match the numbers in Column A with their representation in Column B.

Column A

___ 1.) 73 465

___ 2.) 85 108

___ 3.) 92 584

___ 4.) 76 387

___ 5.) 81 285

Column B

a. 9 + 2 + 5 + 8 + 4

b. 7 + 3 + 4 + 6 + 5

c. 8 + 5 + 1 + 0 + 8

d. 8 + 1 + 2 + 8 + 5

e. 8 + 1 + 3 + 8 + 5

f. 7 + 6 + 3 + 8 + 7



What I Have Learned

Fill in the blanks to complete the statement. Choose your answer inside the box.

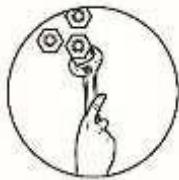
units
flats

discs
blocks

visualizing
longs

logs
numbers

In _____ numbers, use  _____,  _____,  _____,
 _____,  _____, and  _____,
or number _____ such as 10,000s, 1000s, 100s, 10s, and 1s.



What I Can Do

A. Use number discs to show the numbers

1. There were 36 567 tourist who came to the country last month

2. About 45 000 people went to Palawan last month.

B. Draw numbers discs to show these numbers

1. There are 27 341 people affected by flood.

2. The city mayor went 3 762kg of rice to the evacuees.



Additional Activities

Do what item tells you to do. Write the numbers that is:

- 1.) 20,000 more than 24658. _____
- 2.) 20,000 more than 18459. _____
- 3.) 1,000 less than 50 000 _____
- 4.) 1,000 less than 48 750 _____
- 5.) 30,000 less than 49 999 _____

Lesson

2

Place Value and Value of a Digit in Numbers up to 100 000

Did you wash your hands kids? Well done! Today, we will have another activities that will help you learn the value and place value of a number.

Learning Objectives:

1. Give the place value and value of a digit in numbers up to 100 000.
2. Write the place value and value of a digit in numbers up to 100 000.
3. Show interest and concern to those who are in need especially in this time of pandemic.



What's In

Let's play the game "Number Match Up". It's all about the interesting lesson on visualizing numbers that I have learned from the previous module.

Match the number in Column A with their representations in Column B. Write the letter on the space provided.

Column A

Column A

1) 52 483

a. 3



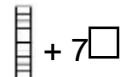
+ 8



+ 2



+ 1



+ 7

2) 43 105

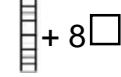
b. 7



+ 5

+ 3

+ 4



+ 8

3) 75 348

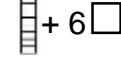
c. 5



+ 4

+ 5

+ 9



+ 6

4) 54 596

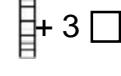
d. 5



+ 2



+ 4



+ 3

5) 38 217

e. 4



+ 3



+ 1



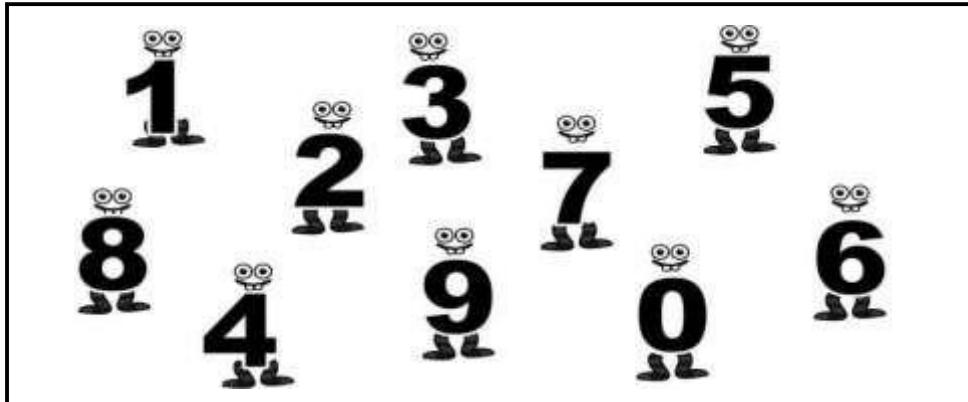
+ 5



What's New

This module focuses on the place value and value of each digits in a number. The value of each digit depends on its position that it occupies in a larger number.

In the box below are my friends called “**DIGITS**”.



They can be combined to form different group of **numbers**.

Read the situation below and answer the questions that follow.

JMSA Foundation donated 25 364 food packs which include half-sack of rice, canned goods, noodles and a tray of eggs to the residents of Barangay Glamang who were affected by the ongoing enhanced community quarantine because of the COVID-19 threat.

Questions:

1. What is the name of the foundation? _____
2. What foods are included in the food packs? _____
3. How many food packs were donated? _____
4. If you were given a chance to donate food packs to the needy, how do you feel? _____
5. Why it is important to help others in need? _____



What is It

Let us go deeper on the meaning of place value and value of the digits within a larger number. There are also some important terminologies you must learn and remember about our topic.

In giving the place value and value of a digit of a number up to 100 000:

- Identify the place value in which the digit belongs to as ones, tens, hundreds, thousands, ten thousands.
- The place value of a digit is always 10 times as great as the place value of the digit to its right.
- The value of a digit is determined by multiplying the said digit by its place value.

Study how 25 364 is written in the place value chart below.

PLACE VALUE CHART						
Place value	Hundred Thousands 100 000	Ten Thousands 10 000	Thousands 1 000	Hundreds 100	Tens 10	Ones 1
Digits		2	5	3	6	4
(multiply the digit by its place value)		$2 \times 10\,000$	$5 \times 1\,000$	3×100	6×10	4×1
Value		20 000	5 000	300	60	4
Expanded form		20 000	5 000	300	60	+ 4
Standard Form	25 364					

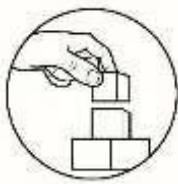
The digit 4 is in the ones place. Its value is 9.

The digit 6 is in the tens place. Its value is 60.

The digit 3 is in the hundreds place. Its value is 300.

The digit 5 is in the thousands place. Its value is 5 000.

The digit 2 is in the ten thousands place. Its value is 20 000.



What's More

Let us try to answer more challenging set of problems and activities about the place value and value of the digits in a number.

A. Write the place value and value of the digit in the number 84 569.

	<i>Place Value</i>	<i>Value</i>
1)	8	_____
2)	5	_____
3)	4	_____
4)	9	_____
5)	6	_____

B. Write the missing numbers on the blank.

1. 57 548 means $50\ 000 + 7\ 000 + \underline{\hspace{2cm}} + 40 + 8$
2. 42 697 means $40\ 000 + \underline{\hspace{2cm}} + 600 + 90 + 7$
3. 86 432 means $80\ 000 + 6\ 000 + 400 + \underline{\hspace{2cm}} + 2$
4. 93 081 means $90\ 000 + 3\ 000 + \underline{\hspace{2cm}} + 80 + 1$
5. 46 509 means $\underline{\hspace{2cm}} + 6\ 000 + 500 + 9$

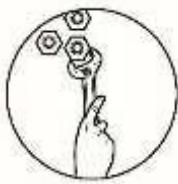


What I Have Learned

Fill in the blanks with the correct word that would make the statement true.

In giving the place value and value of a _____ of a number up to 100 000:

- Identify the _____ in which the digit belongs to as ones, tens, _____, thousands, and _____ thousands.
- The place value of a digit is always _____ times as great as the place value of the digit to its _____.
- The value of a digit is determined by _____ the said digit by its place value.



What I Can Do

Here is another activity that lets you apply what have you learned about the Place Value and Value of a Number by relating it to real-life situations.

To stop the virus from spreading, my family decided to solicit hand soaps and bottles of alcohol from our generous friends and donated the said items to the people in our barangay. We collected 97 378 hand soaps and 100 000 bottles of alcohol.

Comprehension Check:

What is the highest place value in the number 97 378? _____

What is the highest place value in the number 100 000? _____

Did my family collect more hand soaps than bottles of alcohol? Why is it important to wash our hands? _____



Additional Activities

Let us play “**HULA-BIRA**”

Hula-Bira - it is a Pinoy version of a guessing game.

What number is it based on the clues?

1. What is the smallest 5-digit number without repeating digit?
2. What is the largest 5-digit number that contains the digits 8, 6, 0, 9, and 2?
3. What new number will be formed if the ten thousands digit of the number 47 682 is increased by 5 and the tens digit is decreased by 3?

Amazing! You did a good job in applying what you have learned!

Lesson

3

Reading and Writing Numbers up to 100 000 in Symbols and in Words

Hi kids, I hope you are ready now. I know you enjoyed our activities yesterday. This time, we will learn more and I know you will like it more!

Learning Objectives:

1. Read and write numbers up to 100 000 in symbols and in words correctly.
2. Write numbers up to 100 000 in symbols and in words correctly.
3. Appreciate the importance of backyard gardening.



What's In

A pleasant day to start with another module! Do you know that there are rules in reading and writing numbers? After using this module, you are expected to read and write numbers up to hundred thousand in symbols and in words. (**M4NS-1a-9.4**).

In your previous lesson, you have learned the **place value** and the **value** of each digit in a number as shown.

PERIODS					
THOUSANDS			UNIT		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
	9	8	9	0	2

Write: **98 902**

Read: **Ninety-eight thousand, nine hundred two.**

Remember:

1. To read a five-digit number, we must separate the digits by periods.
2. The number formed by the digits in one period are read together, along with the name of the period.
3. Starting from the right, separate the unit period from the thousands period by providing a space or writing a comma after three places.
4. Numbers are written in words in the same way that they are read.



What's New

This module focuses on reading and writing numbers up to hundred thousands in symbols and in words. Study the situation below and answer the questions that follow.

The Department of Agriculture in Region XII intensified the promotion of vegetable planting amidst the COVID-19 crisis. They donated different variety of vegetable seeds to every household in the entire region. The total number of vegetable seeds donated was 49 575.

Questions:

1. What agency intensified the promotion of vegetable planting in Region 12?
2. What are the possible vegetable seeds were donated?
3. Why it is important to plant vegetables in our backyard?
4. How many vegetable seeds were donated by the agency?
(Write the figure)
5. How do you read this figure? (Write it in words)



What is It

Below are the following rules to read and write whole numbers:

RULE 1: Read each group of digits from left to right, then say the name of the group or period except in the unit period.

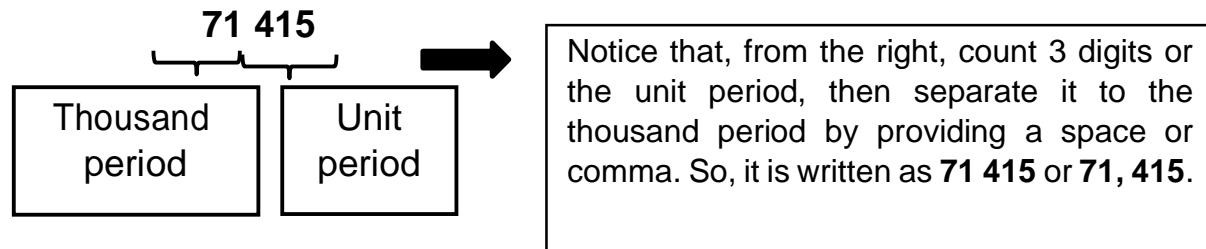
EXAMPLE: Read 89 523.

89 523
_____ _____
| |
Thousand period Unit period

Notice that, we have 89 in the thousand period, and 523 in the unit period. So, it is read as “**eighty-nine thousand, five hundred twenty-three**”. Remember, numbers are written in words in the same way that they are read.

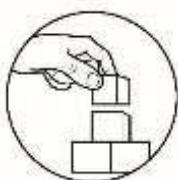
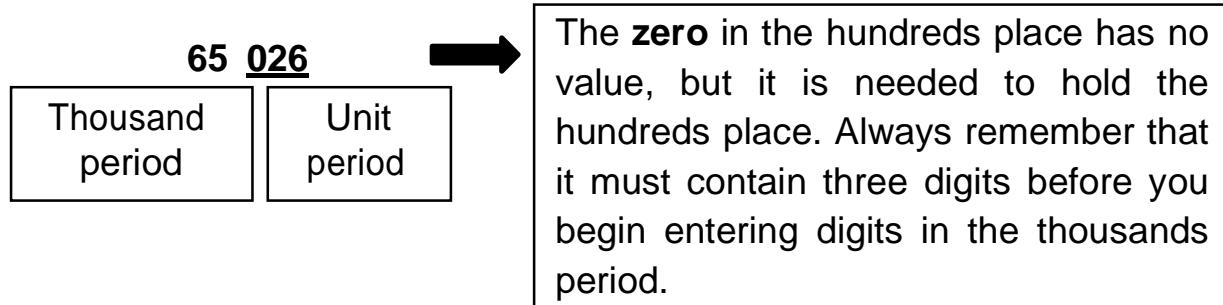
RULE 2: Starting from the right, separate the unit period from the thousand period by providing a space or writing a comma after three places.

EXAMPLE: Write “**seventy-one thousand, four hundred fifteen**” in symbol.



RULE 3: When writing numbers in symbols, use zero as a place holder.

EXAMPLE: Write “**sixty-five thousand, twenty-six**” in symbol.



What's More

Let us try to answer more challenging set of problems and activities about reading and writing numbers up to 100 000.

A. Complete the table by writing the missing symbols and words.

SYMBOL		WORDS
1.	26 905	
2.		<i>Seventy-one thousand, nine hundred eleven</i>
3.	65 008	
4.		<i>Fifty thousand, nine</i>
5.	94 012	

B. Match the numbers in symbols with the corresponding numbers in words. Write the letter of your answer on the space provided.

- | | |
|------------|---|
| 1.) 87 901 | a.) eighty-one thousand, three hundred |
| 2.) 90 875 | b.) seventy-five thousand, two |
| 3.) 75 002 | c.) eighty-seven thousand, nine hundred one |
| 4.) 81 300 | d.) sixty-five thousand, two hundred five |
| 5.) 65 205 | e.) ninety thousand, eight hundred seventy-five |



What I Have Learned

Here is another activity that lets you apply what you have learned about reading and writing numbers up to 100 000. Fill in the blanks with the correct word that would make the statement true.

When **READING NUMBERS** up to 100 000, read each group of digits from _____ to _____, then say the name of the period except in the _____ period.

When **WRITING NUMBERS** up to 100 000, separate the unit period from the thousand period by providing a _____ or _____ after three places. Use _____ as a place holder.



What I Can Do

Here is another activity that will help you apply what you have learned about Reading and Writing Numbers by relating it to real-life situations. Write it in symbols and in words

1. What is the largest 5- digit number using different digits?

Symbol: _____

Words: _____

2. What number comes after 36 459?

Symbol: _____

Words: _____

3. What is the smallest 5-digit even number using the digit only once?

Symbol: _____

Words: _____

4. What number comes before 70 990?

Symbol: _____

Words: _____

5. Using the digits 3, 2, 8, 1, and 5 only once, form a largest 5 digit even number.

Symbol: _____

Words: _____



Additional Activities

Write the following numbers in symbols.

_____ 1.) Ninety-eight thousand, six hundred twenty.

_____ 2.) One hundred thousand

_____ 3.) Seventy-one thousand, six hundred eighty two

_____ 4.) Sixty thousand, three.

Good job! Prepare for the next lesson.

**Lesson
4**

Comparing Numbers up to 100 000 using Relation Symbols

How are you kids? How do you find your day today than yesterday?
Hope it is happier today.

Learning Objectives:

1. Compares numbers up to 100 000 using relation symbols
2. Writes relation symbols such as $>$, $<$, or $=$ in comparing numbers
3. Shows dedication in works



What's In

In your previous lesson, you have learned that place value gives the position of a digit in a given number and the value tells us the worth of a digit.

The value of the digit on the right of a given digit in the place value chart is ten times less than that of the given digit.

Example:

Place Value	Ten Thousands	Thousands	Hundreds	Tens	Ones
98 641	9	8	6	4	1

Look at the table above, identify the place value of the following numbers. What is the place value of 1 ?, 8?, 9?, 4?, and 6?

Multiple Choice. Select the letter of the correct answer.

1. In the number 30 782, the digit 3 is in the _____ place.
a. thousands b. ten thousands c. hundreds d. tens
2. In the number 24 560, the digit 4 is in the _____ place.
a. ten thousands b. hundreds c. thousands d. tens
3. In the number 68 249, the digit 2 is in the _____ place.
a. ones b. ten thousands c. hundreds d. tens

4. In the number 35 072, the digit 7 is in the _____ place.
a. thousands b. ten thousands c. hundreds d. tens
5. The number 32 648, the digit 8 is in the _____ place
a. ones b. thousands c. hundreds d. tens



What's New

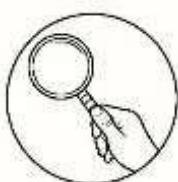
Today you are going to learn about comparing numbers up to 100,000 using relation symbols.

Read the problem below.

Mang Tony is a fisherman. Yesterday he harvested 17 845 kilograms of Tilapia. Today he harvested 17 546 kilograms of Tilapia. Which day he harvested more?

Questions:

1. How many kilograms of Tilapia were harvested yesterday?
2. How many kilograms of Tilapia are harvested today?
3. What is asked in the problem?
4. What day did harvested less?
5. How will you find the answer to the problem?
6. What kind of person Mang Tony is?



What is It

Discussion:

We used to compare numbers to determine which number is greater, less or equal using relation symbols, such as greater than ($>$), less than ($<$) and equal to ($=$).

How to determine which number is greater than, less than or equal to?
Follow the steps below to find out.

STEPS IN COMPARING TWO NUMBERS

1. Align the digits with the same place value.

Example: **17 546** and **17 845**

17 546
17 845 align

2. Compare the digits in each place value starting from the left. The first pair of digits that are different values will determine which number is greater or less.

STEP 1	STEP 2	STEP 3
<p>Compare the digits in the ten thousand's place</p> <p>17 546 17 845</p> <p>Same digits in the ten thousand's place</p>	<p>Compare the digits in the thousand's place</p> <p>17 546 17 845</p> <p>Same digits in the thousand's place</p>	<p>Compare the digits in the hundred's place</p> <p>17 546 17 845</p> <p>Since 8>5 .therefore, 17 845 > 17 546.</p>

Below are important terminologies, notations and symbols that you must learn and remember about comparing numbers using relational symbols.

The symbol **>** is read as “**is greater than**” and is used when the number on the left is larger than the digit in the right.

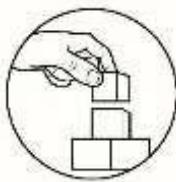
Examples: a. 4 354 **>** 4 205
 b. 74 385 **>** 71 493

The symbol **<** is read as “**is less than**” and is used when the number on the left is less than the number on the right.

Examples: a) 9 674 **<** 9 789
 b) 12 583 **<** 13 002

The symbol **=** is read as “**is equal to**” or “**equals**” and is used when the number on the left is of the same value with the number on the right.

Examples a) 4 273 = 4000 + 200 + 70 + 3
 b) 5 650 = 5000 + 650



What's More

Let us try to answer more challenging set of problems and some activities about comparing numbers.

1. Which is greater 19 567 or 19 765?
2. Ana walks to school 5 200 seconds a day while Lorna walks 5 150 seconds every day. Who spends more time in walking?
3. The house of Maricar is 3 500 meters away from the church, while Tonet lives 6 500 meters away from it. Who lives farther from the church?

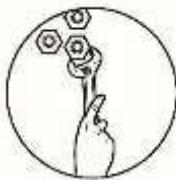


What I Have Learned

Here is another activity that you can apply on what you have learned about comparing numbers up to 100 000 using relation symbols. How do you compare numbers using relation symbols? Fill in the blanks with the correct word/s or symbol that would make the statement true.

The value of digit to the right of any given digit in the place value chart is _____ than that digit.

- ❖ The symbol $>$ is read as “_____ and the symbol $<$ is read as _____.
- ❖ The symbol _____ means “is equal to”.



What I Can Do

Here is another activity that you do where you can apply what you have learned about comparing numbers up to 100 000 by relating it to your experiences in real life situations.

Read and answer the question correctly:

In 2015, the population of Lapaz City was 32 275, this year 2020, its population is 43 426. In what year did it have less population?

Answer: _____



Additional Activities

Read and analyze the given situation. Then solve what is asked.

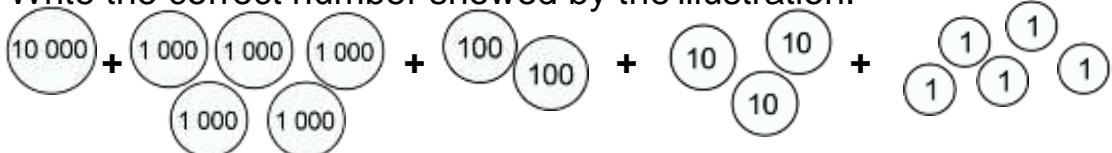
If there are 50 320 Lips candies in a box and 50 408 Lollipops in another box. Which box has more candies?



Assessment

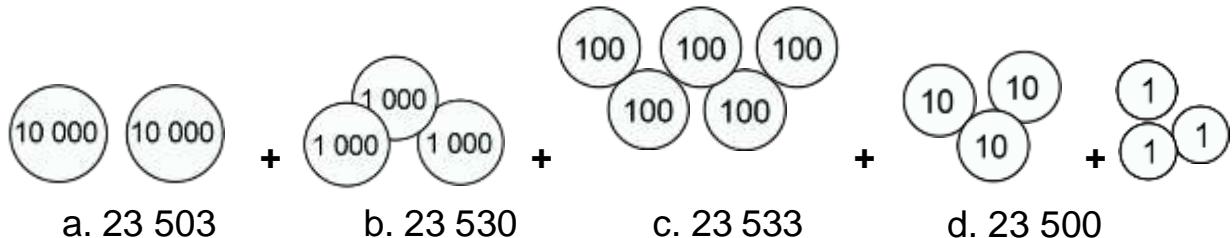
Read and understand the situations carefully. Choose the letter of the correct answer in the blank.

1. Write the correct number showed by the illustration.



- a. 15 000 b. 15 352 c. 15 253 d. 15 235

2. What number is 10 000 more than 13 533?



- a. 23 503 b. 23 530 c. 23 533 d. 23 500

3. What symbol should be used to make the equation
65 101 _____ 65 011 correct?

- a. > b. < c. = d. ≠

4. Which statement is correct?

- a. 3 000 > 3 101 c. 45 352 < 45 353
b. 25 004 = 25 400 d. 16 205 ≠ 16 205

5. In 72 165, give the value of the digit in the thousands place?

- a. 2 000 b. 5 000 c. 6 000 d. 9 000

6. A private institution donated 59 482 Personal Protective Equipment (PPEs) among the COVID-19 frontliners in Region XII. What is the place value of the digit 5 in the number 59 482?

- a. Tens b. Hundreds c. Thousands d. Ten Thousands

7. How is the digit 2 in the number 57 243 is related to digit 2 in the number 96 251?

1. Both have a value of 20. 3. Both have a value of 2 000
2. Both have a value of 200. 4. Both have a value of 20 000.

8. The number 89 198 is read as_____.

1. eighty-nine thousand, nine hundred eight
2. ninety-eight thousand, ninety-eight
3. eighty-nine thousand, nine hundred eight
4. eighty-nine thousand, one hundred ninety-eight

9. Which number symbol is read as seventy-three thousand, nine hundred four?

- a. 73 094 b. 73 940 c. 73 904 d. 73 409

10. What is the number word for 96 989?

1. ninety-six thousand, nine hundred ninety-eight
2. ninety-six thousand, nine hundred eighty-nine
3. sixty-nine thousand, nine hundred eighty-nine
4. ninety-six thousand, nine hundred ninety-eight



Answer Key

What I know p.3

Post Assessment	1. D 2. C 3. A 4. C 5. A 6. D 7. B 8. D 9. C 10. B
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