## What Is This Module About?

Numbers are part of your everyday life. Knowing how to count, add and subtract will be of great help to you then.
When you buy something, you use numbers. You tell how many of each item you want. You ask how much you should pay the cashier or how much change you should get. You see how important knowledge on basic math is?

This module will introduce you to basic mathematical skills. Study it carefully. It will help make you a better mathematician.

This module is made up of three lessons:
Lesson 1—Reading and Writing Numbers
Lesson 2-Addition
Lesson 3-Subtraction

## What Will You Learn From This Module?

After studying this module, you should be able to:

- tell the difference between a digit and a number;
- identify the place value and the value of a digit in a given number;
- compare numbers using the symbols <, > and =;
- add whole numbers up to two digits;
- subtract whole numbers up to two digits; and
- solve simple problems using addition and subtraction.


## Let's See What You Already Know

Before studying this module, take this simple test first to find out how much you already know about the topics to be discussed.
A. Encircle the number in which the digit, $\mathbf{6}$, has a greater value in each given pair below.

1. 628 and 762
2. 136 and 564
3. 600 and 986
4. 610 and 169
5. 916 and 265
B. Write either $>($ greater than $),<$ (less than) or $=$ (equal to) in each blank to complete the following mathematical expressions.
6. 1019
7. 92 ___ 93
8. 76 ___ 76
9. 84 ____ 64
10. $55 \ldots 41$
C. Add the following numbers.
11. $18+1=$ $\qquad$
12. $2+14=$ $\qquad$
13. $1+10=$ $\qquad$
14. $8+0=$ $\qquad$
15. $7+6=$ $\qquad$
D. Subtract the following numbers.
16. $12-0=$ $\qquad$
17. $9-9=$ $\qquad$
18. $16-8=$ $\qquad$
19. $13-6=$ $\qquad$
20. $17-9=$ $\qquad$
Well, how was it? Do you think you fared well? Compare your answers with those in the Answer Key on page 49.
If all your answers are correct, very good! This shows that you already know much about the topics in this module. You may still study the module to review what you already know. Who knows, you might learn a few more new things as well.

If you got a low score, don't feel bad. This only means that this module is for you. It will help you understand some important concepts that you can apply in your daily life. If you study this module carefully, you will learn the answers to all the items in the test and a lot more! Are you ready?

You may now go to the next page to begin Lesson 1.

## Lesson 1

## Reading and Writing Numbers

Each of us is a consumer. We pay for goods and services. Prices are expressed in numbers. Are the expressions "how many" and "how much" familiar to you? You can see numbers everywhere. We see them inside passenger jeeps, in the market, at work and even at home.

In this lesson, you will learn not only how to read and write numbers. You will also learn how one number is related to another.

## Let's Read

Study the picture on the next page. Loida bought a bag of tomatoes from Mang Tino's store. One bag has 8 tomatoes. If Loida buys 10 bags, she would have 80 tomatoes in all. If she buys 100 bags, she would have 800 tomatoes. That's a lot of tomatoes!


## Let's Think About This

The number $\mathbf{8}$ was used many times in the previous activity. But do you know that it has a different value each time? Can you guess where among 8,80 and 8008 had the greatest value? Write your answer in the box below.
$\square$
If you answered "in 800 ," you are right.

## Let's Try This

Let us review how to count by tens. Fill in the blanks with the correct answers


Compare your answers with those in the Answer Key on page 50.

## Let's Learn

Do you know all the ten symbols that we use in our number or numeration system? These are $\mathbf{0}, \mathbf{1}, \mathbf{2}, \mathbf{3}, \mathbf{4}, \mathbf{5}, \mathbf{6}, 7,8$, and 9. These symbols are called digits. Numbers are made up of digits. The number, 349, has three digits namely, 3,4 and 9 .

Try to answer the following questions.

1. How many digits are there in the number 729 ? $\qquad$
2. What are the digits of the number 608 ? $\qquad$ , $\qquad$ and $\qquad$
Do you think you got both answers right? There are three digits in the number 729 . The digits of the number 608 are 6 , 0 and 8.

The value of a digit depends on its place within a number. This is why our system of writing numbers is called the place value numeration system. Look at the place value chart below.

| Number | Hundreds | Tens |
| :---: | :---: | :---: |
| 543 | 5 | 4 |
| 209 | 2 | 0 |
| 167 | 1 | 6 |

Look at the first row of the chart.

| Number | Hundreds | Tens |
| :---: | :---: | :---: |
| 543 | 5 | 4 |

The digit 5 is in the hundreds place so its value is five hundred or 500 . The digit 4 is in the tens place so its value is forty or 40 . Lastly, the digit 3 is in the ones place so its value is three or 3 .

Can you read the number aloud? When we read a number, we read each place at a time. We read from left to right. The number is therefore read as five hundred forty-three.

## Let's Review

1. Give the place value and value of the digit $\mathbf{4}$ in each of the numbers below. Write your answer in the blank. Follow the example.

Place Value Value
a. 724 $\qquad$
$\qquad$
4
b. 406 $\qquad$
$\qquad$
c. 849
d. 431
$\qquad$
$\qquad$
$\qquad$
2. Write the following numbers in figures. The first one has been done to guide you.
a. one hundred eighty-two

182
b. three hundred fifty-one $\qquad$
c. six hundred forty-seven $\qquad$
d. ninety-three $\qquad$
Compare your answers with those in the Answer Key on page 51.

## Let's Learn

Can you guess which of the three 8 s in the number 888 has the greatest value? If you say that the one on the farthest left has the greatest value, then you're right. The one on the farthest right therefore is the one with the smallest value.

In any number, the leftmost digit always has the smallest value and the rightmost digit always has the biggest value.
What if there is no digit in a place like the tens place? We use 0 in places with no digits. Zero is therefore called a placeholder but has no value. If we don't use it, we will get a number different from what we really mean.

Look at the chart below.

| Number | Hundreds | Tens |
| :---: | :---: | :---: |
| 109 | 1 | 0 |
| 19 |  | 1 |

If what you really mean to write is 109 but forgot to put 0 in the tens place, you'd get another number instead. In this case, you'd get 19, which is different from 109.

## Let's Try This

Write the following numbers in figures and indicate the place value of zero in each number. The first one has been done for you.

## Figure <br> Place Value of Zero

1. three hundred six $\qquad$
306 $\qquad$
2. seven hundred ninety $\qquad$
$\qquad$
3. eight hundred five $\qquad$
$\qquad$
4. four hundred twenty $\qquad$
$\qquad$
5. nine hundred two $\qquad$
$\qquad$
Compare your answers with those in the Answer Key on page 52.

Do you know how a number is related to other numbers? A number is either less than, greater than or equal to another number.

A number is said to be greater than another number if it is bigger or if it has a greater value than the second number. A number greater than another number is written before the symbol $>$. This symbol is read as greater than.

Look at the example below.

```
819>807
```

It is read as "Eight hundred nineteen is greater than eight hundred seven."
When do we say that a number is less than another number? A number is less than another number if it has smaller value than the second number. When a number is less than another number, it is written before the symbol <. This symbol is read as less than.

Look at the example below.

$$
725<983
$$

It is read as "Seven hundred twenty-five is less than nine hundred eighty-three.
Can we interchange the sets of numbers above without changing the symbol between them? No, we can't. The number sentence would be incorrect.

We said in the earlier example that $725<983$. Let's see what will happen if we interchange the numbers.
$983<725$.
Is the number sentence correct? No, it's not. What should we do to correct it? After interchanging the numbers, we should also change the symbol between them.
$983>725$
Either (725 < 983) or (983 > 725) is correct.

What if a number is neither greater than nor less than another number? Then it must be equal to it. Equal numbers have the same value. The symbol $=$ is read as equals or is equal to.

$$
615=615
$$

It is read as, "Six hundred fifteen equals six hundred fifteen." It can also be read as, "Six hundred fifteen is equal to six hundred fifteen."

## Let's Try This

Compare the following sets of numbers by using the symbols $>, \boxed{<}$ or $=$.

1. five hundred two $\square$ two hundred five
2. three hundred 300
3. 915 623
4. $275 \square 680$
5. $345 \square 345$

Compare your answers with those in the Answer Key on page 52.

## Let's See What You Have Learned

A. Write how many digits each number has on the blank before it. Then, write the digits in the place value chart. Study the example below before you start answering.

Place Value Chart
$\qquad$ 422

1. $\qquad$ 917
2. $\qquad$10
3. $\qquad$ 256
4. $\qquad$ 8
5. $\qquad$ 374

| Hundreds | Tens | Ones |
| :---: | :---: | ---: |
| 4 | 2 | 2 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

B. In the numbers $\mathbf{1 7 9}, 267$ and $\mathbf{7 8 5}$, where does the digit 7:

1. have the greatest value? $\qquad$
2. have the smallest value? $\qquad$
C. Write the following numbers in figures. An example has been provided to guide you.
one hundred ninety-two
192
3. seven hundred sixty-one
4. four hundred three
5. nine hundred fifty-seven $\qquad$
6. two hundred eleven $\qquad$
7. eight hundred sixty $\qquad$
D. Write either $>($ greater than $),<$ (less than) or $=($ equal to $)$ in each blank.
8. 132 496
9. 758 $\qquad$ 301
10. 671 ____ 571
11. 203 $\qquad$ 203
12. 824 $\qquad$ 969

Compare your answers with those in the Answer Key on pages 52 and 53.

## Let's Remember

- There are ten symbols in our numeration or number system. These symbols are called digits. These are $0,1,2,3$, $4,5,6,7,8$ and 9 . Digits make up numbers.
- The value of a digit depends on its place within a number. This is why our system of writing numbers is called a place value numeration system.
- In any number, a digit has a smaller value than any digit on its left.
- Zero is a placeholder but has no value.
- A number can either be less than, greater than or equal to another number. We use the following symbols for this:
- > read as "greater than";
- < read as "less than"; and
- = read as "equals" or "is equal to."


## Lesson 2

## Addition

Have you tried selling anything like fish or vegetables before? What do you say when your customer asks you how much his/her bill is? How about when you are the one who is buying? Do you ask how much your bill is and pay right away? or do you compute first for the cost of the items you bought before paying for them?

In this lesson, you will learn about addition. It will be very useful to you especially when buying or selling goods.


There are three brands of laundry soap in Sonia's sari-sari store. There are 31 bars of Bubbles, 14 bars of Color and 23 bars of Silky. Sonia wanted to know how many bars of soap there are in all.

## Let's Learn

This is how she found out. She added the number of soaps using the expanded form.

$$
\text { addends }\left[\begin{array}{rlr}
31 & = & 30+1 \\
14 & = & 10+4 \\
+23 & =+\frac{20+3}{60+8} \\
\text { sum } & \rightarrow=68
\end{array}\right.
$$

In addition, the numbers to be added are called addends. The answer is called the sum.
When using the expanded form, the addends are broken down into the value of each digit before adding them.

## Let's Try This

Find the sums of the following sets of numbers using Sonia's method, the expanded form. The first one has been done for you.


## Solution:


2. 22

15 $\begin{array}{r} \\ +\quad 51 \\ \hline\end{array}$

Compare your answers with those in the Answer Key on page 53.

## Lets Learn

There is another way of finding the sum or total of the number of laundry soap in Sonia's sari-sari store. Her mother, Aling Maring, used the short method. She aligned the addends first. Then, she added the digits that belong to the same place.

$$
\begin{array}{r}
31 \\
14 \\
+\quad 23 \\
\hline 68
\end{array}
$$

Although Aling Maring and Sonia used different methods, they got the same answer.

## Lets Try This

Find the sums of the following using Aling Maring's method, the short method. The first one has been done for you.

1. 24
2. 43
21
3. 34
12
$+\frac{13}{69}$
$+35$
$+41$

Compare your answers with the ones given below.
2. 43
3. 34
21
12
$+\frac{35}{99}$
$\begin{array}{r}+41 \\ \hline 87\end{array}$

## Lets Learn

You have just learned how to add numbers using the expanded form method and the short method. Now, let's discuss another method, regrouping.

Rowena saved 尹19 from her weekly allowance. During the weekend, she earned $\mp 25$ from selling old newspapers and bottles. To find out how much money she has in all, let us add them using the expanded form.

## STEPS

$$
\begin{aligned}
\mathrm{F} 19 & =\mathrm{P} 10+9 \\
+25 & =+20+5 \\
& =\frac{+14}{30+1} \\
& =30+10+4 \\
& =(30+10)+4 \\
& =40+4 \\
& =44
\end{aligned}
$$

1. Write the addends in column form.
2. Write the expanded form of each addend.
3. Add the ones first followed by the tens.
4. Regroup the sum.
5. Put the tens together.
6. Add the tens and the ones.

Rowena has F 44 in all.

## Let's Try This

Find the sums of the following sets of numbers using the expanded form method. Show your solutions. The first one has been done for you.

## Solution:

1. 18

36
+27

$$
\begin{aligned}
18 & =10+8 \\
+36 & =30+6 \\
\hline 27 & =+\frac{20+7}{60+21} \\
& =60+20+1 \\
& =60+20)+1 \\
& =(60+1 \\
& =80+1 \\
& =81
\end{aligned}
$$

Solution:
3. $\frac{47}{+39}$

## Solution:




Compare your answers with those in the Answer Key on page 53.

## Let's Learn

Now, let's use the short method along with regrouping to add numbers. Let's use the same example.

| STEP 1 | STEP 2 |  |
| :--- | :---: | :---: |
| Write the addends in column <br> form. | Add the ones. Regroup 1 in <br> the tens place. |  |
|  | 19 | 1 |
| +25 | $+\frac{19}{4}$ | $+\frac{19}{44}$ |

Again, we came up with the same answer even if we used two different methods. The short method is used more often when adding numbers.

## Let's Try This

Find the sums of the following sets of numbers using the short method. The first one has been done for you.

$$
\text { 1. } \begin{array}{r}
49 \\
+\quad 28 \\
\hline 77
\end{array}
$$

2. 18
$+36$
27
3. 66
$+28$

Compare your answers with the ones given below.
2. $\stackrel{2}{18}$
3. $\quad \stackrel{1}{6} 6$
$+36$
$+28$
27
94
81

## Let's Try This

Solve the following addition problems using the short method. Show your solutions.

1. Mang Kiko has different kinds of fruits in his backyard. One morning, he went there to pick some fruits. He was able to get 12 mangoes, 24 guavas and 13 star apples. How many fruits did Mang Kiko get in all?
2. Aling Celina cooks barbecue during Sundays. Her children sell them at the public market, cockpit and near the church. Her eldest child sold 25 sticks of barbecue, her second child, 29 , and her youngest child, 43 . How many sticks of barbecue did they sell in all?

Compare your answers with those in the Answer Key on page 54.

## Let's See What You Have Learned

A. Find the sums of the following sets of numbers using the expanded form method. Show your solutions.

1. 33
2. 21
3. 35
$+45$
13
28
$+34 \quad+19$
B. Find the sum of the following sets of numbers using the short method. Show your solutions.
4. 14
5. 17
6. 26
23
38
15
$+32$
$+29$
$+37$
C. Solve the following problems using the short method. Show your solutions.
7. Carlo, Rico and Luisa are Mang Manuel's children. Carlo has 25 marbles, Rico has 37 rubber bands and Luisa has 12 jackstones. How many toys do the children have in all?
8. Aling Minda has medicinal plants in her backyard. She has 11 pots of sambong, 13 pots of oregano and 8 pots of mayana. How many pots of medicinal plants does Aling Minda have in all?

Compare your answers with those in the Answer Key on page 54.

## Let's Remember

- Addition is the process of combining two or more numbers. You then get another number that is equivalent to the value of the numbers that were combined.
- The numbers that are added are called addends.
- The plus sign or + . It is used whenever numbers are added.
- The number you get after adding two or more numbers is called the sum. The sum is always greater than any of the addends.
- Any number added to 0 remains unchanged.
- When adding numbers, make sure that the digits having the same place value are aligned. First, add the digits in the ones column. Then add those in the tens column and finally those in the hundreds column.


## Lesson 3

## Subtraction

Do you take a jeep or a tricycle to get to work or to the market? When you pay the driver a 20-peso bill, can you easily compute how much change you should get? After spending some of your 500-peso budget, how will you know how much is left without counting your money?

In this lesson, you will learn about subtraction. After studying this lesson, you should be able to check if you get the right amount of change when shopping.

## Let's Study and Analyze

Study the problem below.
A woman has to transfer a dozen eggs from a plastic bag and into her refrigerator's egg tray. She has already transferred 7 eggs. How many more eggs does she have to transfer?

You can write an addition sentence for this: $7+\square=12$. Did you write 5 in the box? If you did, that's correct. The woman has to transfer 5 more eggs.

But you can also think of it as a subtraction problem. Answer this question: How many eggs have not yet been transferred?

The subtraction sentence is: $12-7=5$.
So, we can say that subtraction is the inverse of addition.

Subtraction
$12-7=5$

Addition
$5+7=12$

## Let's Try This

Identify the missing numbers in the addition sentences below. Then write the equivalent subtraction sentence for each in the blank. The first one has been done for you.

1. $6+7=13 \quad 13-7=6$
2. $\square+8=15$
3. $5+\square=11$
4. $\square$ $+7=16$
5. $6+\square=14$

Compare your answers with the ones below.

1. $\sqrt[6]{ }+7=13$ $\qquad$
2. $9+7=16$ $\qquad$
3. $\boxed{7}+8=15 \quad-15-8=7$
4. $6+8=14$
5. $5+6=11-11-5=6$
$\qquad$
$5.6+8$

## Let's Learn

Aling Liwayway sells candles in front of the church. She sold 45 candles on Saturday. The following day, she sold 95 candles. How many more candles was she able to sell on Sunday compared to those she sold on Saturday?

Let's use subtraction to find this out.
$95-43=\square$

We can use either the expanded form method or the short method to solve subtraction problems.
Expanded form:

$$
\begin{array}{rlr}
95 \rightarrow \text { minuend } & = & 90+5 \\
-43 & \rightarrow \text { subtrahend } & =-\frac{40+3}{50+2}
\end{array}
$$

$$
52 \rightarrow \text { difference } \quad=\quad 52
$$

Aling Liwayway sold 52 more candles on Sunday than on Saturday.
Are you wondering what minuend, subtrahend and difference mean? They are the parts of a subtraction sentence.

- The minuend is the number from which another number is subtracted.
- The subtrahend is the number which is subtracted from the minuend.
- The answer in subtraction is called the difference.


## Let's Try This

Find the difference between the following numbers using the expanded form method. The first one has been done for you.

## Solution:

1. | 68 |  |
| ---: | :--- |
| -35 |  |
| $-\quad$ | $68+8$ |
| -35 | $=-(30+5)$ |
|  | $=30+3$ |
|  |  |

Solution:


## Solution:



Compare your answers with the following:
2. $79=70+9$

$$
\begin{aligned}
-42 & =\frac{-(40+2)}{30+7} \\
& =\frac{1}{2}
\end{aligned}
$$

$$
=37
$$

3. $86=80+6$
$-21=\frac{-(20+1)}{60+5}$
$=65$

## Let's Learn

Now, let's see if we will get the same answer to the given example using the short method.

| STEP 1 | STEP 2 |  |
| :--- | :--- | :--- |
| Write the numbers in <br> column. | Subtract the ones. | Subtra |
| 95 |  |  |
| $\frac{-43}{}$ | $\frac{-43}{2}$ | 95 |

Using the short method, we also got the same difference as in the expanded form. The difference of 95 and 43 is 52 .
To check if your answer is correct, add the difference and the subtrahend. If their sum is equal to the minuend, then your answer is correct.

## Lets Try This

Find the difference between the following sets of numbers using the short method. Show your solutions and check your answers using addition. The first one has been done for you.

2. $75-30=$ $\square$

Check:
3. $88-63=$ $\square$
Check:
4. $66-24=$ $\square$
Check:

Compare your answers with those in the Answer Key on page 55.

## Let's Learn

Luningning saved 95 pesos. She spent 49 pesos of it to buy an old book during a book sale. How much was left of Luningning's savings?

Subtract the cost of the book from the amount of Luningning's total savings to find out how much was left of her savings.

$$
95-49=
$$

$\square$
Let's use the expanded form method.
STEP 1 Write the numbers in column form. Then write their expanded forms.

$$
\begin{array}{rrr}
95 & = & 90+5 \\
-49 & = & -(40+9) \\
\hline
\end{array}
$$

STEP 2 Subtract the ones.

$$
\begin{aligned}
& 95=\quad 90+{ }^{1} 5 \\
& -49=\frac{-40+9}{6}
\end{aligned}
$$

- Subtracting 9 from 5 is not possible because we cannot subtract a bigger number from a smaller one.
- Regroup 10 from 90 to the ones place so that 5 becomes 15 and 90 becomes 80 .
- Subtract 9 from 15 and you will get: $15-9=6$.

STEP 3 Subtract the tens.

$$
\begin{array}{rr}
95 & = \\
-40+5 \\
-49 & = \\
\hline & -(40+9) \\
\hline 40+6
\end{array}
$$

STEP 4 Add the difference of tens and ones.

$$
\begin{aligned}
& 95= \\
&-49+5 \\
&-49-40+9 \\
& \hline 40+6 \\
&=46
\end{aligned}
$$

- Add 40 and 6.

Luningning still has $¥ 46$ left in her savings.

## Let's Try This

Find the difference between the following sets of numbers using the expanded form method. Show your solutions. The first one has been done for you.

1. $52-27=\square$
2. $83-39=$ $\square$
3. $74-36=$ $\square$
$52=\stackrel{40}{50}+{ }^{1} 2$
$-27=\frac{-20+7}{20+5}$
$=25$

Compare your answers with those in the Answer Key on page 55.

## Let's Learn

Now, let's try to use the short method in subtracting numbers with regrouping. Let's use the same example we used earlier.


The difference of 95 and 45 is 46 . Although we used two different methods, we still got the same answer.

## Let's Try This

Find the difference of the following sets of numbers. Show your solutions and check your answers using addition. Then write them in the boxes. The first one has been done for you.

1. $61-38=35$

Check:

$$
\begin{array}{r}
61 \\
-38 \\
\hline 23
\end{array} \begin{array}{r}
23 \\
+38 \\
\hline 61
\end{array}
$$

3. $74-59=$ $\square$
Check:
4. $55-18=\square$

Check:
4. $46-27=$ $\square$
Check:

Compare your answers with those in the Answer Key on page 55.

Read the comic strip below.


## Let's Learn

Let's find out how Aling Elisa knew that Lito kept some of the change for himself.
Aling Elisa gave Lito 50 pesos to buy a bottle of soy sauce. Later in the story, she said that she knows exactly how much a bottle of soy sauce costs. Suppose it costs 14 pesos, how much change should Aling Elisa get?

Let's use the expanded form method to find out.
STEP 1 Write the numbers in column form. Then write their expanded forms.

$$
\begin{array}{rr}
50 & =50+0 \\
-\quad 14 & =-10+4 \\
\hline
\end{array}
$$

STEP 2 Subtract the ones.
$50=\quad \stackrel{40}{50}+{ }^{1} 0$
$-14=\frac{-10+4}{6}$

- Since subtracting 4 from 0 is not possible, regroup 10 from 50 to 0 so that 50 becomes 40 and 0 becomes 10 .
- Subtract 4 from 10 and you will get: $10-4=6$.
- Subtract 10 from 40 .

STEP 3 Subtract the tens.

$$
\begin{array}{r}
50=\begin{array}{c}
40 \\
50+1 \\
-14 \\
-
\end{array} \begin{array}{r}
-10+4 \\
\hline 30+6
\end{array}
\end{array}
$$

STEP 4 Add the difference of the tens and the ones.

$$
\begin{aligned}
50 & =\quad 50+{ }^{1} 0 \\
-14 & =\frac{-10+4}{30+6} \\
& =36
\end{aligned}
$$

Aling Elisa should get 36 pesos as change.

## Let's Try This

Find the difference between the following sets of numbers using the expanded form method. Show your solutions. The first one has been done for you.

1. 80

$$
80=\stackrel{40}{80}+{ }^{1} 0
$$

2. 70

$$
-56 \quad-56=\frac{-50+6}{20+4}
$$

$-43$
3. 60
$-28$

Compare your answers with those in the Answer Key on page 56

## Let's Learn

Now, let's learn how to subtract with zero in the minuend using the short method.


We got the same answer, didn't we?
Notice that subtraction is not possible when the digit in the minuend is smaller than the digit in the subtrahend. Regrouping should be done to make it possible.

## Let's Try This

Find the difference between the following sets of numbers using the short method. Then check your answers using addition. The first one has been done for you.


Compare your answers with those in the Answer Key on page 56.

## Let's See What You Have Learned

A. Give the missing number in each addition sentence below. Then write the equivalent subtraction sentence for it in the blank.
1.$+5=13$ $\qquad$
2. $7+\square=16$ $\qquad$
3.

$\qquad$
4. $6+\square=12$
5. $\square$ $+8=14$ $\qquad$
B. Find the difference between the following sets of numbers using the expanded form method. Show your solutions.

1. 74
2. 63
$-51$
$-25$
3. $\begin{array}{r}80 \\ -42\end{array}$
4. 32

- 18

5. 60
$-33$
C. Subtract each of the following numbers using the short method. Then check your answers using addition.
6. 55
$-21$
7. 82
$-69$
8. 70
$-24$
9. 75
$-39$
10. 90
$\begin{array}{r}-54 \\ \hline\end{array}$
D. Solve the following subtraction problems using the short method. Show your solutions then check your answers using addition.
11. A trip from Aling Eva's town to the capital town of their province costs $\boldsymbol{P} 17$. She gave the driver a 50peso bill. How much change should she get?
12. Mang Nestor bought a pair of slippers which costs P13. How much change should he get if he gave the seller a 20-peso bill?
13. Kristine counted the number of flowers in her mother's garden. She found out that there are 35 roses and 19 daisies. How many more roses are there than daisies?

Compare your answers with those in the Answer Key on pages 56 to 58.

## Let's Remember

- Subtraction is the process of taking away a number from a bigger number.
- The minus sign $(-)$ is used in subtraction.
- The minuend is the number from which another number is subtracted.
- The subtrahend is the number which is subtracted from the minuend.
- The answer in subtraction is called the difference.
- If the digit in the minuend is smaller than the digit in the subtrahend, regrouping is done to make subtraction possible.
- The sum of the difference and the subtrahend must be equal to the minuend.

Well, how was it? Did you get a perfect score? If you did, very good! That means that you have learned a lot from this module. If you got a low score, review the parts of the lesson that you didn't understand very well.

You have reached the end of this module. Congratulations! Your perseverance and eagerness to learn have paid off. The following is a summary of the module's main points to help you remember them better.

## Let's Sum Up

This module tells us that:

- Addition is the process of combining two or more numbers. You get another number whose value is equivalent to the value of the numbers that were combined.
- The numbers that are added are called addends.
- The plus sign or + is used whenever numbers are added.
- The number you get after adding two or more numbers is called the sum. The sum is always greater than any of the addends.
- Any number added to 0 remains unchanged.
- When adding numbers, make sure that the digits having the same place value are aligned. First, add the digits in the ones column. Then add those in the tens column and finally those in the hundreds column.
- Subtraction is the process of taking away a number from a bigger number.
- The minus sign $(-)$ is used in subtraction.
- The minuend is the number from which another number is subtracted.
- The subtrahend is the number which is subtracted from the minuend.
- The answer in subtraction is called the difference.
- If the digit in the minuend is smaller than the digit in the subtrahend, regrouping is done to make subtraction possible.
- The sum of the difference and the subtrahend must be equal to the minuend.


## What Have You Learned?

A. Give the digits of each number.

1. 333 $\qquad$
2. 147 $\qquad$
3. 28 $\qquad$
4. 905 $\qquad$
5. 686 $\qquad$
B. Write either $>,<$ or $=$ in each blank.
6. 113 _____ 112
7. 259 ____ 259
8. 197 ____ 486
9. 504 ____ 601
10. 318 ___ 308
C. Find the sum/difference of the following numbers using the expanded form method. Show your solutions.
11. $\begin{array}{r}23 \\ \hline+35 \\ \hline+31\end{array}$
12. 16
13. 89
$-34$
14. 62
$-49$
15. 70
$-26$
D. Find the sums of or the difference between the following numbers using the short method. Show your solutions.
16. 53

12
$+24$
2. 28

14
$+45$
3. 56
$-22$
4. 72
$-24$
5. 90

- 37
E. Solve the following problems using addition and subtraction. Show your solutions. Use the short method.

1. Diwa sells boiled eggs at the bus station. She boiled 24 eggs which came from the native chickens in her backyard and 72 more eggs which she bought from the sari-sari store. How many eggs did Diwa boil in all?
2. Marie bought a sandwich and buko juice for snacks. The sandwich costs P18 while the buko juice costs尹7. How much did she spend in all?
3. Marissa brought 88 mangoes to the market to sell. When she returned home, she counted all the mangoes that were left. There were 12 mangoes left. How many mangoes were sold?
4. The distance from Lorie's house to the capital town of their province is 62 kilometers. The distance from their house to the gasoline station is 14 kilometers. How far away are the gasoline station and the capital town from the each other?
5. Melissa has $¥ 90$. She spent P 44 for her lunch. How much was left?

Compare your answers with those in the Answer Key on pages 59 and 60.

## Answer Key

## A. Let's See What You Already Know (pages 2-3)

A. 1. 628 and 762
2. 136 and 564
3. 600 and 986
4. 610 and 169
5. 916 and 265
B. 1. $10<19$
2. $92<93$
3. $76=76$
4. $84>64$
5. $55>41$
C. 1. $18+1=\mathbf{1 9}$
2. $2+14=\mathbf{1 6}$
3. $1+10=11$
4. $8+0=\mathbf{8}$
5. $7+6=\mathbf{1 3}$
D. 1. $12-0=\mathbf{1 2}$
2. $9-9=\mathbf{0}$
3. $16-8=\mathbf{8}$
4. $13-6=7$
5. $17-9=8$
B. Lesson 1

Let's Try This (page 6)


Let's Review (page 8)

1. Place Value

Value
b. hundreds

400
c. tens

40
d. hundreds

400
2. b. 351
c. 647
d. 93

Let's Try This (page 10)
Figure
Place Value of Zero
2. 790
ones
3. 805
tens
4. 420
ones
5. 902
tens

Let's Try This (page 12)

1. five hundred two $>$ two hundred five
2. three hundred $=300$
3. $915>623$
4. 275 < 680
5. $345=345$

Let's See What You Have Learned (pages 14-15)
A. 1. $-3-917$
2. $\quad 2 \quad 10$
3. $\quad 3 \quad 256$
4. $1 \quad 8$
5. $\quad 3 \quad 374$

| Hundreds | Tens | Ones |
| :---: | :---: | :---: |
| 9 | 1 | 7 |
|  | 1 | 0 |
| 2 | 5 | 6 |
| 3 | 7 | 8 |

B. 1 . 785
2. 267
C. 1. 761
2. 403
3. 957
4. 211
5. 860
D. 1. $132<496$
2. $758>301$
3. $671>571$
4. $203=203$
5. $824<969$

## C. Lesson 2

Let's Try This (page 18)
2. $22=20+2$
$15=10+5$
$\begin{aligned}+51 & =\frac{50+1}{+80+8} \\ & =88\end{aligned}$
3. $34=30+4$
$11=10+1$
$+52=\frac{50+2}{+90+7}$
$=97$

Let's Try This (page 21)
2. $24=20+4$
$56=50+6$
$+19=\frac{+10+9}{80+19}$
3. $47=40+7$
$\begin{aligned}+39 & =\frac{+30+9}{70+16}\end{aligned}$
$\begin{array}{ll}= & \widehat{~} \\ = & 70+10+6\end{array}$
$=80+10+9$
$\begin{aligned} & =70+10+6 \\ & = \\ & \end{aligned} \quad(70+10)+6$
$=(80+10)+9$
$=80+6$
$=90+9$
$=86$

Let's Try This (page 23)

1. 12

34
$\begin{array}{r}+\quad 13 \\ \hline 49\end{array}$ Mang Kiko got 49 fruits in all.
2. 25

29
$+\quad 43$
97 They sold 97 sticks of barbecue in all.
Let's See What You Have Learned (pages 24-25)
A. 1. $33=30+3$
$\begin{aligned}+45 & =+40+5 \\ & =70+8 \\ & =78\end{aligned}$
2. $21=20+1$
$13=10+3$
$\begin{aligned}+34 & =+30+4 \\ & =\frac{+30+8}{68}\end{aligned}$
$=68$
3. $35=30+5$
$28=20+8$
$\begin{aligned}+19 & =\frac{+10+9}{60+22} \\ & =\frac{1}{60}\end{aligned}$
$=60+20+2$
$=(60+20)+2$
$=80+2$
$=82$
B. 1. 14
$\begin{array}{r}23 \\ 32 \\ \hline 69\end{array}$
$\begin{array}{r}+\quad 32 \\ \hline 69\end{array}$
2. 17
$+\quad 29$
3. $\stackrel{1}{26}$
15
$\begin{array}{r}+\quad 37 \\ \hline 78\end{array}$
C. 1. 25
37
2. 11
13
$+\frac{12}{74} \rightarrow$ The children have 74 toys in all.
$+\quad 8$
32 Aling Minda has 32 pots of medicinal plants in all.

## D. Lesson 3

Let's Try This (page 32)
2. $75-30=45$
3. $88-63=25$
4. $66-24=42$

Check:
Check:
Check:

$$
\begin{array}{r}
75 \\
-30 \\
\hline 45
\end{array} \begin{array}{r}
45 \\
+30 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
88 \\
-63 \\
\hline 25
\end{array} \quad \begin{array}{r}
25 \\
+63 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
66 \\
-24 \\
\hline 42
\end{array} \quad \begin{array}{r}
42 \\
+24 \\
\hline 66
\end{array}
$$

Let's Try This (page 34)
2. $83-39=44$
3. $74-36=38$

$$
\begin{aligned}
& 83=\quad 80+3 \\
&-39=-30+9 \\
&-40+4 \\
&=44
\end{aligned}
$$

$$
\begin{aligned}
74 & =\begin{array}{r}
60 \\
70 \\
1
\end{array}+4 \\
-36 & =\frac{-30+6}{30+8} \\
& =38
\end{aligned}
$$

Let's Try This (page 36)
2. $55-18=37$

Check:

$$
\begin{array}{r}
41 \\
\$ 5 \\
-18 \\
\hline 37
\end{array} \quad \begin{array}{r}
37 \\
+\quad 18 \\
\hline
\end{array}
$$

3. $74-59=15$

Check:

4. $46-27=19$

Check:

$$
\begin{array}{r}
31 \\
46 \\
-27 \\
\hline 19
\end{array} \quad \begin{array}{r}
19 \\
+27 \\
\hline 46
\end{array}
$$

Let's Try This (page 39)
2. 70
$70=70+0$

$$
-43 \quad-43=\frac{-40+3}{20+7}
$$

$$
=27
$$

3. 60
$\begin{array}{r}60 \\ -28 \\ \hline\end{array}$

$$
60=60+0
$$

$$
\begin{aligned}
-28 & =\frac{-(20+8)}{30+2} \\
& =32
\end{aligned}
$$

$$
=32
$$

Let's Try This (page 41)
2.

Check:

3.
Check:
$\begin{array}{r}4 \\ \mathbf{5} 0 \\ -23 \\ \hline 27\end{array} \begin{array}{r}\square \\ \hline\end{array} \begin{array}{r}1 \\ +27 \\ \hline 20\end{array}$

Let's See What You Have Learned (pages 42-44)
A. 1. $8+5=13 \quad 13-5=8$
2. $7+9=16 \quad 16-7=9$
3. $4+7=11 \quad 11-7=4$
4. $6+6=12 \quad 12-6=6$
5. $6+8=14 \quad 14-8=6$
B. $1 . \begin{aligned} 74 & =70+4 \\ -51 & =-50+1 \\ - & =\frac{20+3}{} \\ & =23\end{aligned}$
4. $\quad 32=\quad 30+{ }^{1} 2$

$$
\begin{aligned}
-18 & =-10+8 \\
& =\frac{10+4}{10+1}
\end{aligned}
$$

$$
=14
$$

C. 1 .

Check:

$$
\begin{array}{r}
55 \\
-21 \\
\hline 34
\end{array} \quad \begin{array}{r}
34 \\
+21 \\
\hline 65
\end{array}
$$

4. 

$$
\begin{array}{r}
6_{1} \\
\times 5 \\
-39 \\
\hline 36
\end{array} \quad \begin{array}{r}
1 \\
36 \\
+39 \\
\hline 75
\end{array}
$$

2. $63=\stackrel{50}{60}+\frac{1}{+}$

$$
\begin{aligned}
-25 & =-20+5 \\
& =\frac{30+8}{} \\
& =38
\end{aligned}
$$

5. $60=\begin{aligned} & 50 \\ & 60\end{aligned}{ }^{1} 0$

$$
-33=\frac{-30+3}{20+7}
$$

$$
=27
$$

3. 

$$
\begin{array}{r}
6_{1} \\
\not \times 0 \\
-24 \\
\hline 46
\end{array} \quad \begin{array}{r}
1 \\
46 \\
+24 \\
\hline
\end{array}
$$

3. $80=\quad{ }^{70} 80+{ }^{1} 0$
$\begin{aligned}-42 & =\frac{-(40+2)}{30+8} \\ & =38\end{aligned}$
4. 



Check:

$$
\begin{array}{r}
81 \\
90 \\
-54 \\
\hline 36
\end{array} \quad \begin{array}{r}
1 \\
36 \\
+54 \\
\hline 90
\end{array}
$$

D. 1. Solution: Check:

$$
\begin{array}{r}
41 \\
50 \\
-17 \\
\hline 33
\end{array} \quad \begin{array}{r}
33 \\
+\quad \begin{array}{r}
37 \\
+
\end{array} \\
\hline 50
\end{array}
$$

Aling Eva should get a change of $\ddagger 33$.
2. Solution: Check:

$$
\begin{array}{r}
1_{1} \\
-13 \\
\hline 7
\end{array} \quad \begin{array}{r}
1 \\
\square
\end{array} \quad \begin{array}{r}
73 \\
+13
\end{array}
$$

Mang Nestor should get a change of $¥ 7$.
3. Solution: Check:


There are 16 more roses compared to daisies.
E. What Have You Learned? (pages 46-48)
A. 1. The digits of the number $\mathbf{1 3 3}$ are $\mathbf{1 , 3}$ and $\mathbf{3}$.
2. The digits of the number $\mathbf{1 4 7}$ are $\mathbf{1 , 4}$ and $\mathbf{7}$.
3. The digits of the number $\mathbf{2 8}$ are $\mathbf{2}$ and $\mathbf{8}$.
4. The digits of the number $\mathbf{9 0 5}$ are $\mathbf{9}, \mathbf{0}$ and $\mathbf{5}$.
5. The digits of the number $\mathbf{6 8 6}$ are $\mathbf{6 , 8} \mathbf{8}$ and $\mathbf{6}$.
B. 1. $113>112$
2. $259=259$
3. $197<486$
4. $504<601$
5. $318>308$

$$
\text { C. } \begin{aligned}
1.23 & =20+3 \\
35 & =30+5 \\
+31 & =+30+1 \\
\hline & =80+9 \\
& =89
\end{aligned}
$$

$$
\text { 2. } \begin{aligned}
16 & =10+6 \\
38 & =30+8 \\
+24 & =+20+4 \\
+ & =+18 \\
& =60+10+8 \\
& =(60+10)+8 \\
& =70+8 \\
& =78
\end{aligned}
$$

$$
\text { 3. } \begin{aligned}
89 & =80+9 \\
-34 & =-30+4 \\
& =\frac{50+5}{} \\
& =55
\end{aligned}
$$

4. | 62 | $=\begin{array}{r}50 \\ \gamma Q+2 \\ -49\end{array}=-\quad 40+9$ |
| ---: | :--- |
|  | $=10+3$ |
|  | $=13$ |
5. $70=\quad{ }^{60} Q+{ }^{1} 0$
$\begin{aligned}-26 & =-20+6 \\ & =\frac{-20+4}{} \\ & =44\end{aligned}$
D. 1 . 53
6. 28
$\begin{array}{r}12 \\ +24 \\ \hline 89\end{array} \begin{array}{r}14 \\ +45 \\ \hline 87\end{array}$
7. 

Check:
$\begin{array}{r}56 \\ -22 \\ \hline 34\end{array} \begin{array}{r}34 \\ +22 \\ \hline\end{array}$
4.
$\begin{array}{r}61 \\ 72 \\ -24 \\ \hline 48\end{array} \quad \begin{array}{r}1 \\ 48 \\ +24 \\ \hline\end{array}$

E. 1. $\stackrel{1}{24}$
$\frac{+72}{96} \rightarrow \quad$ Diwa boiled 96 eggs in all.
2. 18
$+\frac{7}{25} \rightarrow \quad$ Marie spent $\mp 25$ in all.
5. $90 \stackrel{8}{1}_{1}^{1}$
$\frac{-44}{46} \quad \rightarrow \quad$ Melissa still had P46.
3. 88

$$
\frac{-12}{76} \rightarrow \quad \text { Marissa sold } 76 \text { mangoes in all. }
$$

## References

Bogomolny, Alex. (1999). Place Value. http://www.cut-the-knot.com/ctk/Self Descriptive.html. May 31, 2000, date accessed.

Moving on in Math: Elementary School Mathematics 5. Philippines: Ministry of Education and Culture, 1980.
Moving on in Math: Elementary School Mathematics 4. Philippines: Ministry of Education and Culture, 1978.

