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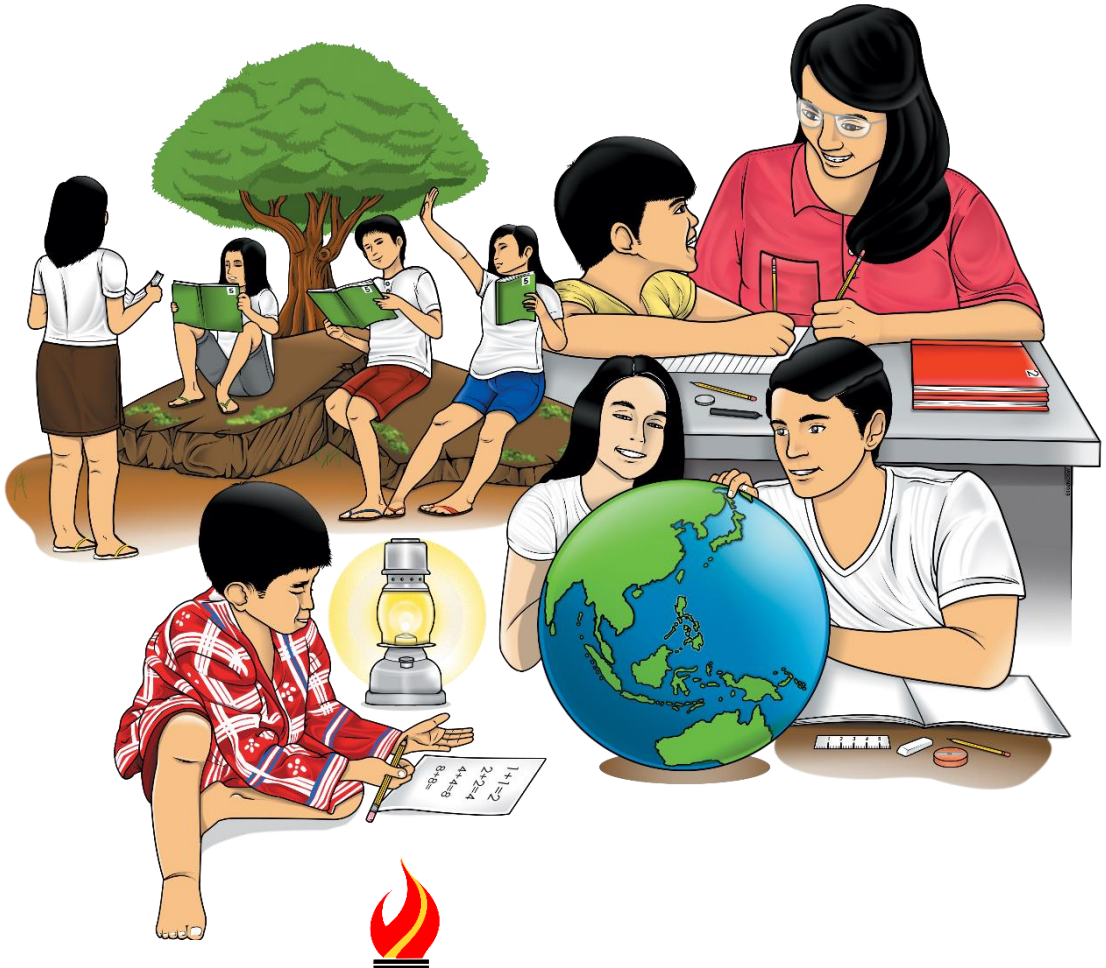
# Mathematics

## Quarter 1 – Module 15(b):
## Subtracting Mentally 2 to 3–Digit Numbers



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**Quarter 1 – Module 15(b): Subtracting Mentally 2 to 3-Digit Numbers**
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# Mathematics

## Quarter 1 – Module 15(b):
Subtracting Mentally 2
to 3–Digit Numbers

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# Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.

# *What I Need to Know*

This module was designed and written with you in mind. It is here to help you comprehend whole numbers, and perform mental math. The scope of this module permits it to be used in many different learning situations. The language used recognizes your diverse vocabulary backgrounds. The lessons are arranged to follow the standard sequence of the course but the order in which you read them can be changed to correspond with the Mathematics Grade 3 learning materials you are using.

After going through this module, you are expected to:

1. Subtract mentally 2 to 3– digit numbers with multiples of hundreds without and with regrouping

Enjoy your journey. Good luck!

# *What I Know*

Subtract the following mentally. You are not allowed to use pen and paper for your solution. Write the final answer directly.

1. 300 – 88 = ?

2. 500 – 135 = ?

3. 62 – 19 = ?

4. 800 – 500 = ?

5. 753 – 100 = ?

# Lesson Subtracts mentally 2 to 3 – Digit Numbers with Multiples of Hundreds

This math lesson will introduce simple strategies that you can use to mentally subtract 2 to 3-digit numbers with multiples of hundreds with ease. The exercises provided in this module will help you practice these strategies.

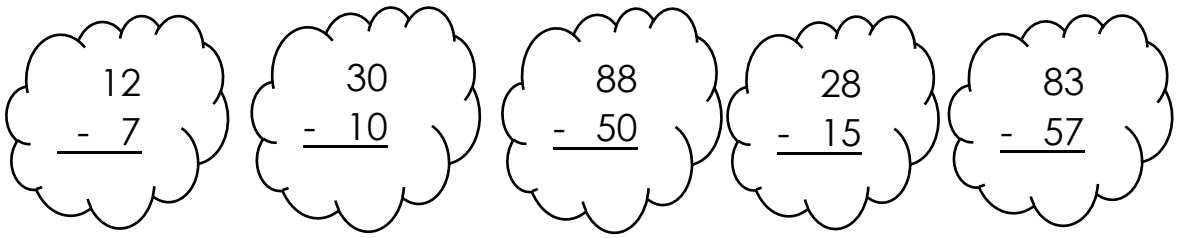
## *What's In*

In your previous lesson you learned to subtract 1 to 2-digit numbers mentally. That lesson is very important to master so that it would be easier for you to subtract 2 to 3-digit numbers mentally. The strategy used in the previous lesson will still be used in this lesson. Only that this time, we will be dealing with larger numbers.

Let us practice what you learned previously.

## Activity 1

Subtract mentally the numbers below.



# *What's New*

## Activity 2

Can you help Anne and Pedro solve their tasks? Answer the problem mentally.

A. Anne bought shoes and bags which cost a total of 300 pesos. She paid 500 pesos. How much change should she expect to receive?

B. Pedro sells eggs for a living. His egg tray can hold 36 eggs. How many more eggs are needed to fill a tray that already has 18 eggs?

# *What is It*

There are instances in real life where mental computation comes in handy. You will face experiences that need you to add or subtract without using a pen and paper. The strategies that will be introduced in this module can be used to subtract mentally, and with constant practice, you will learn to do mental computation with ease.

**Strategy 1. Subtract by digit.** This works well when we subtract without regrouping. This method is also called the basic rule of subtraction. Simply align the digits under the column of ones, tens, hundreds and thousands then subtract digit by digit.

Example: 678 – 123 = ?

Solution:

$$\begin{array}{r} 678 \\ -\ 123 \\ \hline 555 \end{array}$$

**Strategy 2. Add Up to the Subtrahend.** This works well when we subtract with regrouping.

Example 1: 84 – 37 = ?

Solution:

Think of what to add up to 37 to reach 84.

To get the difference of 84 and 37, slowly add your way up to reach 84 starting from the subtrahend, which in this particular example is 37.

(a) 37 + **3** = 40 (40 is the closest tens after 37)
(b) 40 + **40** = 80 (80 is the closest tens before 84)
(c ) 80 + **4** = 84

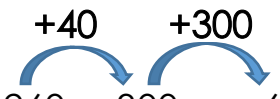
First, add **3** to reach 40, and then add **40** to reach 80. Then finally add **4** to reach 84.

3 + 40 + 4 = 47

The numbers you added up to reach 84 is actually the difference of 84 and 37 which is **47**. Therefore, 84 – 37 = 47.

Example 2: 600 – 260 = ?

Solution: Think of what to add up to the subtrahend to reach the minuend.




add up to the next hundreds after 260

add up in hundreds to reach 600

40 + 300 = 340 total of the numbers being added up

Answer: 600 – 260 = 340

## Strategy 3. Subtract by hundreds and tens.

This strategy works well when subtracting numbers involving 3-digit numbers in hundreds.

### Case 1. The subtrahend is a multiple of hundreds

Example: 876 – 300 = ?

Solution:

**Step 1.** Express the given numbers in hundreds and tens.

(800 + 76) – (300)

**Step 2.** Subtract the hundreds.

a.) 800 – 300 + 76

b.) 500 + 76

c.) **576**

Answer: **876 – 300 = 576**

### Case 2. The minuend is a multiple of hundreds

Example: 600 – 176 = ?

Solution:

**Step 1.** Express in hundreds and tens.

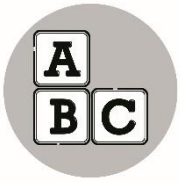
600 – (100 + 76)

**Step 2.** Subtract the hundreds then tens.

a.) 600 – 100 – 76

b.) 500 – 76 = 400 + 100 – 76 = 400 + 24 = **424**

Answer: **600 – 176 = 424**



## *What's More*

## Activity 3

Subtract mentally by applying the following strategy.

I. Subtract by Digit

a.
$$\begin{array}{r} 700 \\ -\ 200 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 983 \\ -\ 700 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 45 \\ -\ 21 \\ \hline \end{array}$$

II. Add up to the Subtrahend

a. 81 − 55 = _____ b. 61 − 38 = _____ c. 500 − 296 = _____

III. Subtract by Hundreds and Tens

a. 400 – 280 = _____

b. 700 – 37 = _____

c. 918 – 300 = _____

# *What I Have Learned*

In subtracting 2 to 3-digit numbers without regrouping mentally:

Subtract by digit. This works well when we subtract without regrouping. This method is also called the basic rule of subtraction. Simply align the digits under the column of ones, tens, hundreds and thousands then subtract digit by digit.

When subtracting 2 to 3-digit numbers with regrouping mentally:

Add up to the subtrahend.

- ✓ Add up to the subtrahend to reach the nearest hundreds or tens and keep on adding up by hundreds or tens until reaching the minuend.
- ✓ Get the total of the numbers being added up.
- ✓ The numbers you added up to reach the minuend is actually the difference.

Subtract by hundreds and tens.

- ✓ Express the given numbers in hundreds and tens.
- ✓ Subtract the hundreds then tens.

# *What I Can Do*

Mentally subtract the following subtraction problems then write the strategy being used.

A) 700 – 530 = _____ Strategy: _____

B) 96 – 43 = _____ Strategy: _____

C) 85– 27 = _____ Strategy: _____

D) 300 – 96 = _____ Strategy: _____

E) 100 – 76 = _____ Strategy: _____

# *Assessment*

Find the difference using mental computation.

1. 300 – 88 =

2. 350 – 95 =

3. 62 – 19 =

4. 100 – 55 =

5. 700 – 516 =

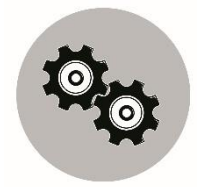
6. 200 – 120 =

7. 500 – 270 =

8. 65 – 45 =

9. You have 70 marbles. You gave away 28 marbles to your friends. How many marbles do you have left?

10. You need to save 250 pesos to buy your mother a birthday present. You already have 120 pesos. How much more do you need to save?



# *Additional Activities*

Pair numbers from Column A to Column B that will give a difference of 15.

List the pair of numbers in your notebook.

| | | |
|---|---|---|
| 29 | 15 | 20 |
| 35 | | 14 |
| 33 | | 18 |
| 47 | | 33 |
| 48 | | 32 |

# Answer Key

**What I Know**

1. 212
2. 365
3. 43
4. 300
5. 600

**What's In**

**Activity 1**

1. 5
2. 20
3. 38
4. 13
5. 26

**What's New**

**Activity 2**

A. 200
B. 18

**What's More**

**Activity 3**

I. a. 500
b. 283
c. 24

II. a. 26
b. 23
c. 204

III. a. 120
b. 663
c. 618

**What I Can Do**

A. 270
B. 53
C. 58
D. 224
E. 24

Note: Strategy used depends on the learner's preference

**Assessment**

1. a. 212
2. 255
3. 43
4. 45
5. 184
6. 80
7. 230
8. 20
9. 42 marbles
10. 130 pesos

**Additional Activity**

29-14=15

35-20=15

33-18=15

47-32=15

48-33=15

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