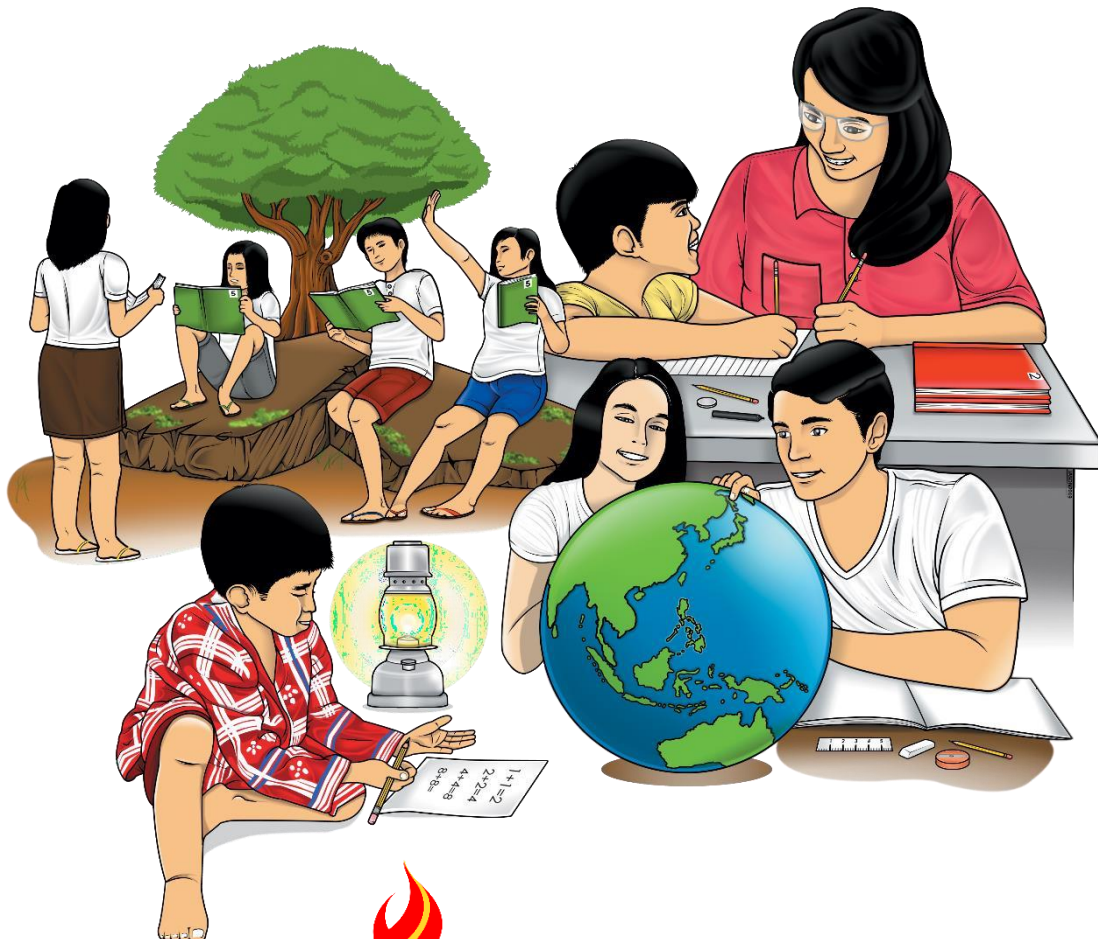


# Mathematics

## Quarter 2 – Module 7: Solving Problems Involving Multiplication



**Mathematics – Grade 3**  
**Alternative Delivery Mode**  
**Quarter 2 – Module 7: Solving Problems Involving Multiplication**  
**First Edition, 2020**

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**Development Team of the Module**

<b>Author</b>	:	Ismael M. Jandayan Jr.
<b>Editors</b>	:	Arnel S. Zaragosa, Jeremias C. Ceniza, Gina F. Silvestre, Elma C. Prudente, Annie Fel Lingatong Edgardo
<b>Reviewers</b>	:	Dondon S. Lorenzo, Ailyn V. Ponce, Emily A Paller, Eduardo Eroy
<b>Illustrators</b>	:	Dennis Macaubos, Alfie Valenteros, Christian Loyd Alfuerio, Pit Ybanez
<b>Layout Artist</b>	:	Louie J. Cortez
<b>Management Team</b>	:	Allan G. Farnazo Mary Jeanne B. Aldeguer Analiza C. Almazan Cielo D. Estrada Maria Liza I. Berandoy
		Alona C. Uy Maria Gina F. Flores Arnel S. Zaragosa Ma. Jeremias C. Ceniza Illuminado T. Boiser

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**Department of Education – Region XI**

Office Address: F. Torres St., Davao City Telefax:  
(082) 291-1665; (082) 221-6147

E-mail Address: region11@deped.gov.ph \* lrms.regionxi@deped.gov.ph

# Mathematics

Quarter 2 – Module 7:  
Solving Problems Involving  
Multiplication

## 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 master Solving Problems Involving Multiplication. The scope of this module permits it to be used in many different learning situations.

In the final lesson of the module, you will apply the tools, representation, and concepts you have learned to problem-solving with multi-step word problems involving multiplication. You will demonstrate the flexibility of your thinking as you assess the reasonableness of the answers for a variety of problem types.

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 textbook you are now using.

After going through this module, you are expected to:

1. Solve Problems Involving Multiplication with Addition and/or Subtraction of Whole Numbers (**M3NS-IIe-45.3**).

Enjoy your journey. Good luck!



## *What I Know*

Directions: Solve the problem by answering the questions below.

Mother has ₱800. She bought 2 dresses worth ₱240 each and a pair of shoes worth ₱270. How much will she pay in all? How much money will be left?

*Solution:*

### Understand

1. What is asked?
2. What are the given?

### Plan

3. What is the process to be used?
4. What is the number sentence?

### Solve using strategy

5. Answer the number sentence:

## Lesson

# 1

## Solves Problems Involving Multiplication with Addition and/or Subtraction of Whole Numbers

In this module, you will learn how to solve routine problems involving multiplication with addition and subtraction using appropriate solving strategies.



### *What's In*

In problem solving, it is necessary to understand what is being asked by the problem, what are the given information and what operation to be used.

Here is an example.

Mother bought 15 boxes of marbles. Each box has 12 pieces of marbles. How many pieces of marbles she bought in all?

1. Who bought the marbles?
2. How many boxes of marbles did she buy in all?
3. What is asked in the problem?
4. What are the given?
5. What is the operation to be used to solve the problem?



## *What's New*

In solving routine problems involving multiplication, follow these steps:

- Step 1      Read and understand the problem.
  - a. Know what is asked
  - b. Know the given
  
- Step 2      Plan what to do.
  - a. Identify the operation to be used
  - b. Give the number sentence
  
- Step 3      Solve the problem.
  - a. Do the required operation
  
- Step 4      Check the answer
  - a. Is the answer reasonable?

Mary went to the mall to buy wallets. She bought 6 wallets that cost ₱35 each. Mary has ₱ 220 in her pocket. She gave it to the cashier and waited for the change. How much is the change?

Know the given

- 1. How many wallets were bought?
- 2. How much does each wallet cost?
- 3. How much money did Mary have?

What is asked?

What operation should be used? What is the number sentence?





## *What is It*

In solving the given problem, it is important to identify the possible operations to be used.

### *Analysis:*

6 wallets were bought at ₱35 each. 35 is multiplied by 6 and its product is deducted from Mary's money which is ₱220. By using this process, we will be able to solve for Mary's change.

### *Solution:*

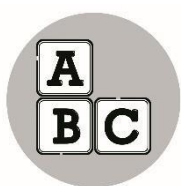
Step 1:

$$\begin{array}{rcl} \text{₱ } 35.00 & = & \text{Cost of 1 wallet} \\ \times \quad 6 & = & \text{Number of wallets bought} \\ \hline \text{₱ } 210.00 & = & \text{cost of 6 wallets} \end{array}$$

Step 2:

$$\begin{array}{rcl} \text{₱ } 220.00 & = & \text{Money of Mary} \\ - \text{₱ } 210.00 & = & \text{Cost of 6 wallets} \\ \hline \text{₱ } 10.00 & = & \text{Change} \end{array}$$

*Answer: Mary's change is ₱ 10.*



## *What's More*

Directions: Read and solve the problems carefully. Write your answer on a separate sheet of paper.

A. The family of Mr. Cruz conducted an outreach program to celebrate his birthday. Inside the outreach hall are 5 long tables with 10 chairs in each table. There are 100 attendees. How many chairs do they still need?

1. What is asked?
2. What are the given?
3. What operation should be used?
4. What is the number sentence?
5. What is the answer?

B. Roy has five ₱50 bills, six ₱100 bills, ten ₱200 bills and five ₱20 bills. How much money does Roy have?

1. What is asked?
2. What are the given?
3. What operation should be used?
4. What is the number sentence?
5. What is the answer?



## *What I Have Learned*

In solving word problems involving multiplication, use the following questions as guide:

1. What is asked?
2. What are the given?
3. What operation should be used?
4. What is the number sentence?
5. What is the answer?



## *What I Can Do*

Directions: Read and solve the problem carefully.

1. Carlo bought 6 mangoes at ₱15 each. How much change will he get if he gave ₱100 to the seller?
2. The Paloma family made *puto* to collect money for the victims of the typhoon. They made 15 boxes of *puto* with 20 pieces in each box. How many pieces of *puto* did the Paloma family members prepare?



## *Assessment*

Direction: Read and solve the problems carefully.

1. Linda gathered 53 kilograms of guava from their farm. She sold it for ₱30 per kilogram. How much did she earn in all?
2. Roy bought 5 kilograms of rambutan at ₱40 per kilogram. How much change did he get from a ₱500 bill?



## *Additional Activities*

Direction: Solve the given problems.

1. Joey has four ₱1 coins, three ₱5 coins and six ₱10 coins. How much money does he have in all?
2. Brandon has 40 one-peso coins. Rico has two times more one-peso coin than Brandon. How many one-peso coin do they have in all?



## Answer Key

<p><b>What I Can Do</b></p> <p>1. ₱10.00 2. 400</p> <p><b>Assessment</b></p> <p>1. ₱300</p> <p><b>Additional Activities</b></p> <p>1. ₱79 2. 120 one-peso coins</p>	<p><b>What's New</b></p> <p>1.6 2. ₱35 each 3. ₱220 4. The cost of 6 wallets Change of Mary 5. Subtraction and Multiplication 6. <math>₱220 - (₱35.00 \times 6) = N</math></p> <p><b>What's More</b></p> <p>A. 1. no. of chairs still needed 2. 20 chairs 5 chairs 100 attendees 3. Multiplication and subtraction 4. <math>100 - (10 \times 5) = n</math> 5. 50 chairs B. 1. Total money Roy have 2. five ₱50-bill, six ₱100- bill, Ten ₱200-bill and five ₱20-bill. 3. Multiplication and Subtraction 3. 4. <math>₱2,950 + (5 \times 20) + (5 \times 50) + (6 \times 100) + (10 \times 200)</math></p>	<p><b>What I Know</b></p> <p>1. ₱750 in all ₱50.00 change 2. Total and change ₱800 original money 2 dresses worth ₱240 Pair of shoes worth ₱270 4. Multiplication with addition and subtraction 5. Change = 800 - total Total = <math>(2 \times 240) +</math> 270</p> <p><b>What's In</b></p> <p>1. Mother 2. 15 boxes 3. No. of pieces of marbles 4. 15 boxes of marbles &amp; 12 pieces of marbles in each box. 5. Multiplication</p>
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## *References*

DepEd -Teaching Guide in Grade 3 Math, pages 197-201

**For inquiries or feedback, please write or call:**

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex  
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: [blr.lrqad@deped.gov.ph](mailto:blr.lrqad@deped.gov.ph) \* [blr.lrpdpd@deped.gov.ph](mailto:blr.lrpdpd@deped.gov.ph)