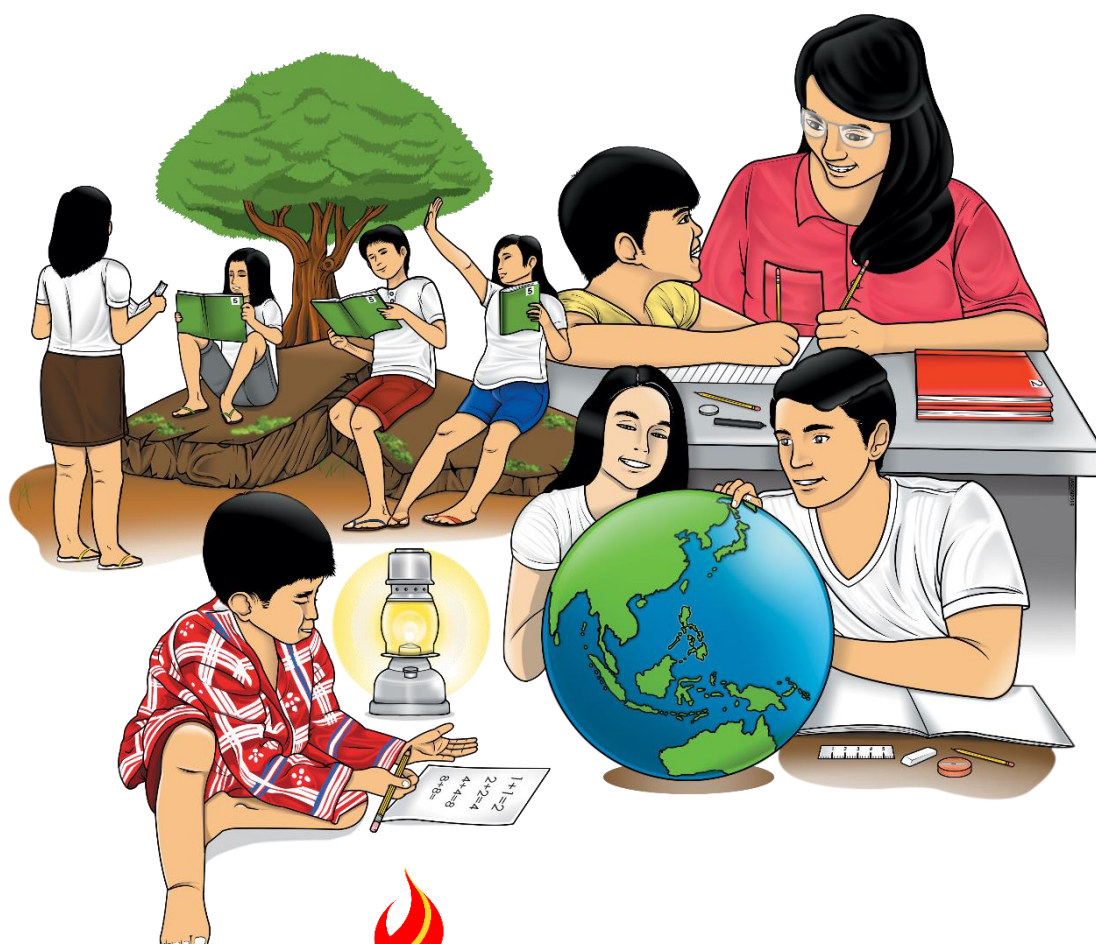


# Mathematics

## Quarter 1 – Module 10:

### Estimates the Sum of 3 to 4- Digit Addends



**Mathematics – Grade 3**  
**Alternative Delivery Mode**  
**Quarter 1 – Module 10: Estimates the Sum of 3 to 4-Digit Addends**  
**First Edition, 2020**

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# Mathematics

Quarter 1 – Module 10:  
Estimates the Sum of 3- to 4-Digit  
Addends

## 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 on estimating the sum of 3 to 4- digit addends with reasonable results. 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. Estimate the sum of 3 to 4- digit addends with reasonable results (**M3NS-Ie-31**).

Enjoy your journey. Good luck!



## *What I Know*

Choose the letter of the correct answer. Write the chosen letter on a separate sheet of paper.

1. What is the estimated sum for  $896 + 325$ ?  
a. 1 000      b. 1 100      c. 1 125      d. 1 200
2. What is the estimated sum for  $2\,465 + 5\,325 + 5\,678$ ?  
a. 13 000      b. 12 000      c. 11 000      d. 10 000
3. Carol's trip in Cebu City includes round trip ticket worth ₱8 548.00 and hotel accommodation worth ₱12 645.00. About how much is her expenses for the trip?  
a. ₱ 20 000    b. ₱ 21 000    c. ₱ 22 000    d. ₱ 23 000
4. Which of the following has an estimated sum of 5,000?  
a.  $2\,500 + 1\,500 + 2\,028$   
b.  $1\,125 + 3\,472 + 954$   
c.  $1\,800 + 2\,100 + 1\,700$   
d.  $995 + 2\,670 + 1\,998$
5. Orllie and Olly save money in the bank. Orllie has a deposit of ₱4 807 while Olly has ₱2 356. Approximately, how much is the savings of the two boys in the bank?  
a. ₱ 5 000  
b. ₱ 6 000  
c. ₱ 7 000  
d. ₱ 8 000

## Lesson

# Estimates the Sum of 3 to 4- Digit Addends with Reasonable Results

In this module, you will be able to learn how to estimate the sum of 3 to 4- digit addends with reasonable results.

Estimation is the process of finding an estimate, or approximation of which the value is closer to the exact answer. It is an important skill to compute things easily and determine the reasonableness of one's solution.

In real life, estimation is part of our daily activities. When you are at the supermarket and trying to stay within a budget, you can estimate the cost of the items that you are going to buy without using any calculator so that you will not go beyond your budget. You can also reasonably estimate time and distances, for example, about how long does it take for you to get from one place to another.



## *What's In*

Before learning how to estimate, let us review the most important skill needed in estimating, the concept of rounding off whole numbers.

Steps in rounding off whole numbers.

- 1.) Identify the digit to be rounded off.
- 2.) Look at the digit at the right of the digit to be rounded off.
  - i.) If the digit is 0,1,2,3, or 4 copy the digit to be rounded off then all the digits at the right will be 0.
  - ii.) If the digit is 5,6,7,8, or 9 add 1 to the digit to be rounded off then all the digits at the right will be 0.

## Activity 1

Round the numbers to the nearest:

	Hundreds		Thousands
1.) 228	_____	4.) 8 732	_____
2.) 356	_____	5.) 5 429	_____
3.) 984	_____	6.) 1 356	_____



### *What's New*

In solving word problem, the clue that the problem is about estimating if the following key words appear: **about, estimate and approximately.**

## Activity 2

Study the table below then answer the questions that follow.  
Carlo, a balot vendor, recorded his earnings for five days.

Day	Amount
Monday	₱ 645
Tuesday	₱ 1 424
Wednesday	₱ 526
Thursday	₱ 798
Friday	₱ 1 523

- 1.) About how much were Carlo's earnings on Monday and Tuesday?
- 2.) What is the approximate earnings of Carlo on Wednesday and Thursday?



- 3.) About how much was Carlo's earnings in five days?
- 4.) What is the actual sum of Carlo's earnings in five days?



### *Notes to the Teacher*

This part will let the readiness of the learner on estimation. Use the discovery method in activating prior knowledge. The learner will be able to assess his/her answer in Activity 2 as the learner proceeds the course of this module.



### *What is It*

In estimating sums, follow the steps below.

Example:

1. Estimate the sum of  $276 + 814 + 325 + 956$ .

**Step 1** Round off the addends to the hundreds place.

	276	→	300
+	814	→	800
	325	→	300
	<u>956</u>	→	1 000

**Step 2** Add the rounded off numbers.

$$\begin{array}{r} 300 \\ + 800 \\ 300 \\ \hline 1000 \\ 2400 \end{array}$$

The estimated sum is 2 400.

Estimate the sum of  $897 + 8\,175 + 5\,525$ .

**Step 1** Round off the addends to the thousands place.

$$\begin{array}{rcl} 897 & \longrightarrow & 900 \\ + 8\,175 & \longrightarrow & 8\,000 \\ \hline 5\,525 & \longrightarrow & 6\,000 \end{array}$$

**Step 2** Add the rounded off numbers.

$$\begin{array}{r} 900 \\ + 8\,000 \\ \hline 6\,000 \\ 14\,900 \end{array}$$

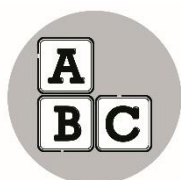
The estimated sum is 14 900.

Let us visit the table in Activity 2 showing Carlo's earnings in selling ballot for five days.

Day	Amount
Monday	₱ 645
Tuesday	₱ 1 424
Wednesday	₱ 526
Thursday	₱ 798
Friday	₱ 1 523

Compare the estimated sum and the actual sum of Carlo's earnings. How reasonable is your estimated sum compared to the actual sum?

- The estimated sum is reasonable when it is closer to the actual sum.



## *What's More*

### Activity 3

Estimate the sum.

$$\begin{array}{r} 1.) \quad 375 \longrightarrow \underline{\hspace{2cm}} \\ + 924 \longrightarrow \underline{\hspace{2cm}} \\ \hline 815 \longrightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 4.) \quad 7\,432 \longrightarrow \underline{\hspace{2cm}} \\ + 6\,378 \longrightarrow \underline{\hspace{2cm}} \\ \hline 3\,529 \longrightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 2.) \quad 675 \longrightarrow \underline{\hspace{2cm}} \\ + 134 \longrightarrow \underline{\hspace{2cm}} \\ \hline 627 \longrightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 5.) \quad 3\,587 \longrightarrow \underline{\hspace{2cm}} \\ + 726 \longrightarrow \underline{\hspace{2cm}} \\ \hline 981 \longrightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$

$$\begin{array}{r} 3.) \quad 2\,756 \longrightarrow \underline{\hspace{2cm}} \\ + 1\,249 \longrightarrow \underline{\hspace{2cm}} \\ \hline 5\,678 \longrightarrow \underline{\hspace{2cm}} \\ \hline \end{array}$$



## *What I Have Learned*

How do you estimate the sum?

- 1.) Round off first the addends to the highest place values.
- 2.) To get the estimated sum, add the rounded addends.



## *What I Can Do*

### Activity 4

Estimate the sum.

$$\begin{array}{r} 1.) \quad 435 \\ + \quad 678 \\ \hline 925 \end{array}$$

$$\begin{array}{r} 4.) \quad 2\,987 \\ + \quad 6\,873 \\ \hline 4\,555 \end{array}$$

$$\begin{array}{r} 2.) \quad 359 \\ + \quad 814 \\ \hline 207 \end{array}$$

$$\begin{array}{r} 5.) \quad 6\,759 \\ + \quad 8\,210 \\ \hline 7\,642 \end{array}$$

$$\begin{array}{r} 3.) \quad 6\,428 \\ + \quad 7\,154 \\ \hline 9\,345 \end{array}$$



## Assessment

### Activity 5

Multiple Choice. Choose the letter of the correct answer.

1. What is the estimated sum of 235, 556, and 428?  
a.) 900                      b.) 1 000                      c.) 1 100                      d.) 1 200
2. Which of the following shows the estimated sum of:  
4 567, 2 156, and 7 213?  
a.) 10 000                      b.) 11 000                      c.) 12 000                      d.) 14 000
3. Which of the following gives an estimate of 20 000?  
a.)  $8\,125 + 8\,889 + 3\,427$   
b.)  $5\,756 + 6\,250 + 8\,612$   
c.)  $9\,856 + 7\,245 + 4\,125$   
d.)  $5\,555 + 4\,218 + 8\,975$

Solve the following problems.

4. Liza bought a second-hand laptop that costs ₱ 9 750, a printer that costs ₱7 150, an external drive that costs ₱ 3 500, and a headphone that costs ₱345. About how much did Liza pay in all?
5. Zarnel travels 2 447 m to the park, then 382 m to the store. He then travels 1 634 m back to his house. Approximately, what is the total distance traveled by Zarnel?



## *Additional Activities*

### Activity 6

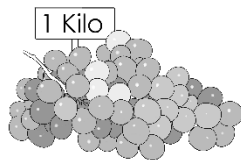
Mrs. Javier went to a grocery store. She bought the following items. Estimate how much will Mrs. Javier pay for all the groceries.



A sack of rice – ₱2 350



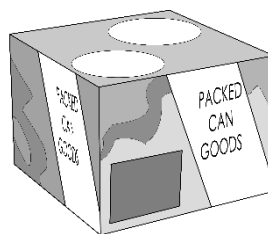
A dressed chicken – ₱ 225



A kilo of grapes - ₱ 280



A kilo of meat – ₱ 220



A pack of canned goods - ₱ 595



## Answer Key

<p>Additional Activity</p> <p>1. 2,000 200 300 200 600</p> <hr/> <p>₱ 3 300</p>	<p>Assessment</p> <p>1. D 2. D 3. A 4. ₱ 21 300 5. 4 400 meters</p>	<p>What I Can Do</p> <p>1.) 2 000 2.) 1 400 3.) 22 000 4.) 15 000 5.) 23 000</p>
<p>What's More</p> <p>1. 2 100 2. 1 400 3. 10 000 4. 17 000 5. 5 700</p>	<p>What's In</p> <p>1. 200 2. 400 3. 1 000 4. 9 000 5. 5 000 6. 1 000</p>	<p>What I Know</p> <p>1. D 2. A 3. C 4. B 5. C</p>



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