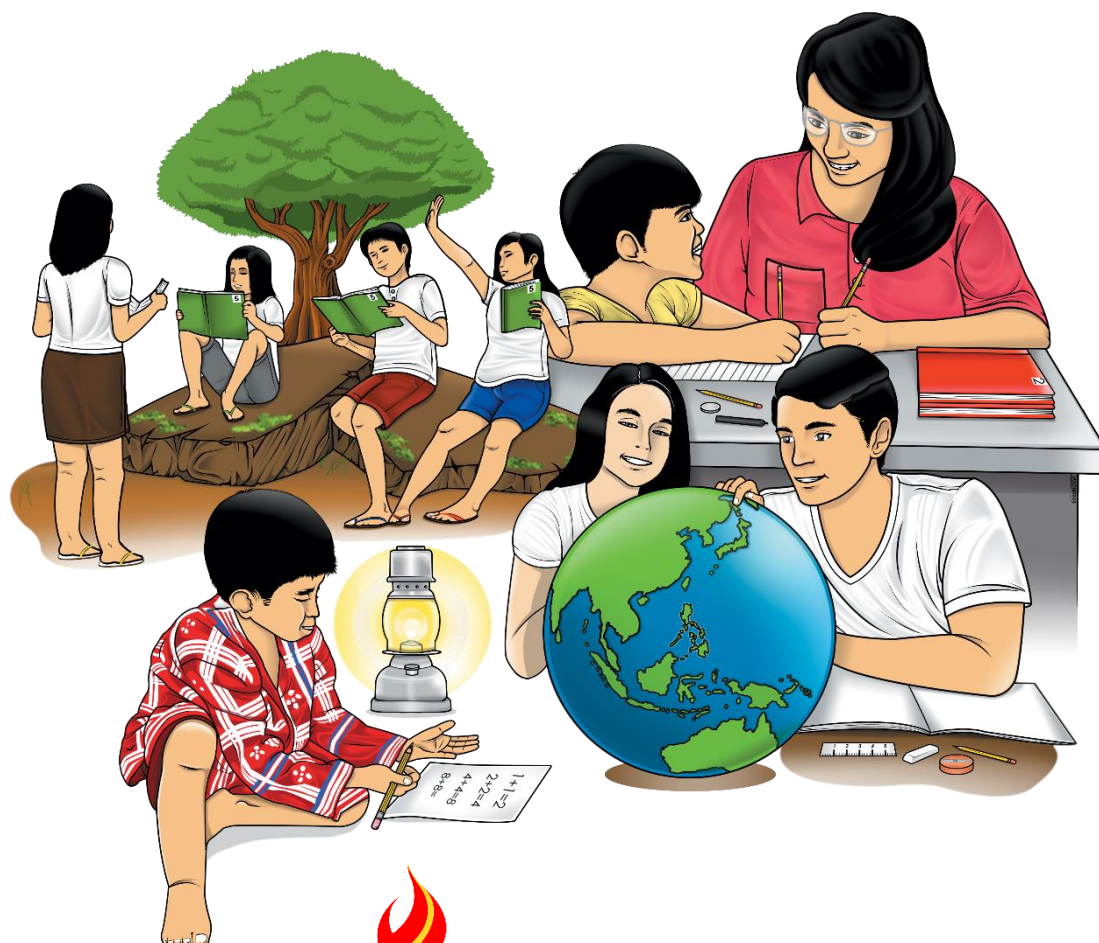


Mathematics

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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Published by the Department of Education
Secretary: Leonor Magtolis Briones
Undersecretary: Diosdado M. San Antonio

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Printed in the Philippines by _____

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Mathematics

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

Introductory Message

For the facilitator:

Welcome to the Grade 3 Mathematics Alternative Delivery Mode (ADM) Module on **Estimating the Sum of 3- to 4- Digit Addends with Reasonable Result!**

This module was collaboratively designed, developed and reviewed by educators both from public and private institutions to assist you, the teacher or facilitator in helping the learners meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills while taking into consideration their needs and circumstances.

In addition to the material in the main text, you will also see this box in the body of the module:



Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the Grade 3 Mathematics Alternative Delivery Mode (ADM) Module on **Estimating the Sum of 3- to 4- Digit Addends with Reasonable Result!**

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. It was made easy for you to process the contents of the learning resource while being an active learner.

This module has the following parts and corresponding icons:



What I Need to Know

This will give you an idea of the skills or competencies you are expected to learn in the module.



What I Know

This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correct (100%), you may decide to skip this module.



What's In

This is a brief drill or review to help you link the current lesson with the previous one.



What's New

In this portion, the new lesson will be introduced to you in various ways such as a story, a song, a poem, a problem opener, an activity or a situation.



What is It

This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.



What's More

This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module.



What I Have Learned

This includes questions or blank sentence/paragraph to be filled in to process what you learned from the lesson.



What I Can Do

This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns.



Assessment

This is a task which aims to evaluate your level of mastery in achieving the learning competency.



Additional Activities

In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson learned.



Answer Key

This contains answers to all activities in the module.

At the end of this module you will also find:

References

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it.



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.

	300
+	800
	<u>1000</u>
	2400

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.

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

Step 2 Add the rounded off numbers.

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

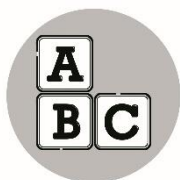
The estimated sum is 14 900.

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.

$$\begin{array}{r} 1.) \quad 375 \rightarrow \underline{\hspace{2cm}} \\ + \quad 924 \rightarrow \underline{\hspace{2cm}} \\ \quad \underline{815} \rightarrow \underline{\hspace{2cm}} \\ \hspace{1.5cm} \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 4.) \quad 7\,432 \rightarrow \underline{\hspace{2cm}} \\ + \quad 6\,378 \rightarrow \underline{\hspace{2cm}} \\ \quad \underline{3\,529} \rightarrow \underline{\hspace{2cm}} \\ \hspace{1.5cm} \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 2.) \quad 675 \rightarrow \underline{\hspace{2cm}} \\ + \quad 134 \rightarrow \underline{\hspace{2cm}} \\ \quad \underline{627} \rightarrow \underline{\hspace{2cm}} \\ \hspace{1.5cm} \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 5.) \quad 3\,587 \rightarrow \underline{\hspace{2cm}} \\ + \quad \quad 726 \rightarrow \underline{\hspace{2cm}} \\ \quad \underline{981} \rightarrow \underline{\hspace{2cm}} \\ \hspace{1.5cm} \underline{\hspace{2cm}} \end{array}$$

$$\begin{array}{r} 3.) \quad 2\,756 \rightarrow \underline{\hspace{2cm}} \\ + \quad 1\,249 \rightarrow \underline{\hspace{2cm}} \\ \quad \underline{5\,678} \rightarrow \underline{\hspace{2cm}} \\ \hspace{1.5cm} \underline{\hspace{2cm}} \end{array}$$



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.

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

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

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

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

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



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

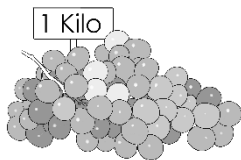
Mrs. Javier went to a grocery store. She bought the following items. Estimate how much will Mrs. Javier pay for all the groceries.



A sack of rice – ₱2 350



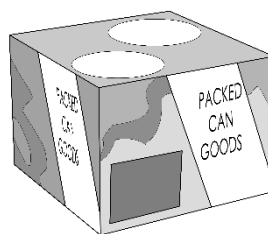
A dressed chicken – ₱ 225



A kilo of grapes - ₱ 280



A kilo of meat – ₱ 220



A pack of canned goods - ₱ 595



Answer Key

- 1.) 2 000
2.) 1 400
3.) 22 000
4.) 15 000
5.) 23 000

What I Can Do

1. D
2. D
3. A
4. ₱ 21 300
5. 4 400 meters

Assessment

1. 2,000
200
300
200
600
₱ 3 300

Additional Activity

1. D
2. A
3. C
4. B
5. C

What I Know

1. 200
2. 400
3. 1 000
4. 9 000
5. 5 000
6. 1 000

What's In

1. 2 100
2. 1 400
3. 10 000
4. 17 000
5. 5 700

What's More

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