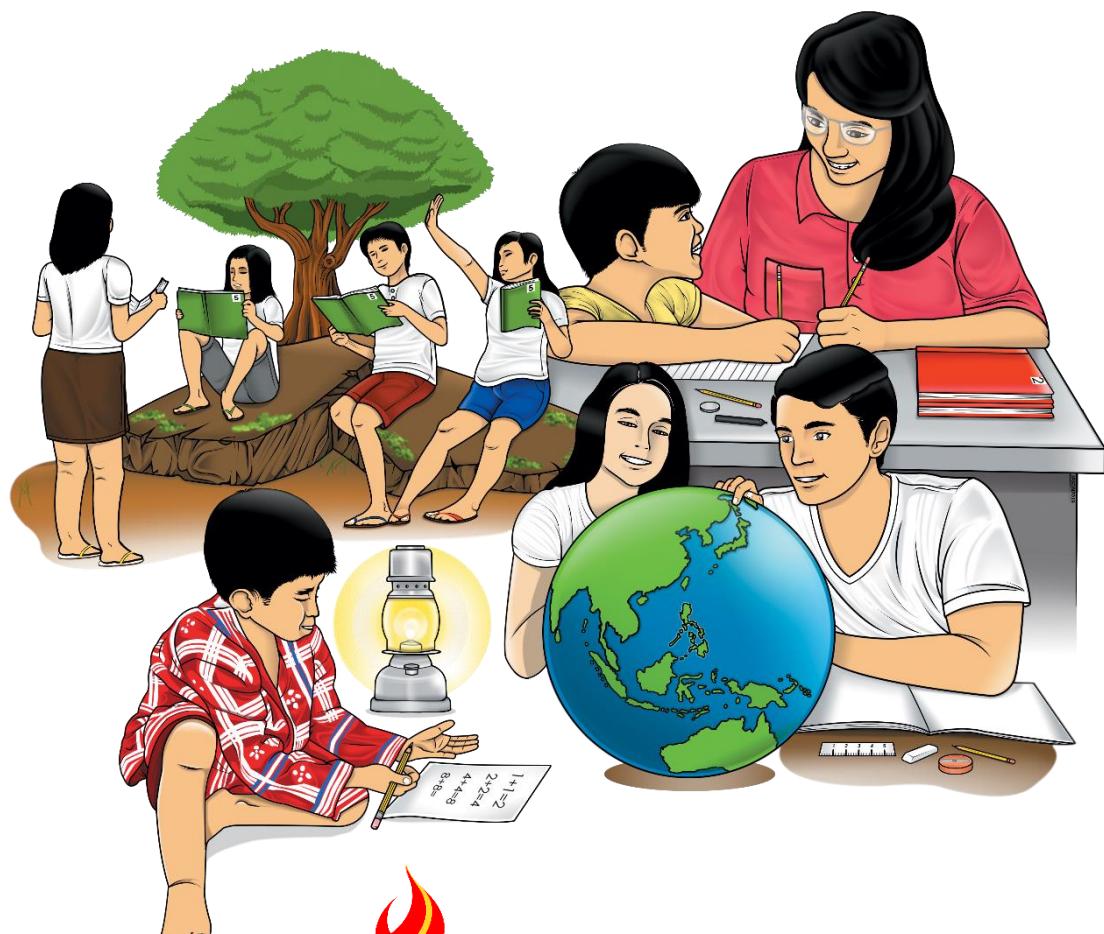


# Mathematics

## Quarter 2 – Module 5: Estimating Products



**Mathematics – Grade 3**  
**Alternative Delivery Mode**  
**Quarter 2 – Module 5: Estimating Products**  
**First Edition, 2020**

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# Mathematics

## Quarter 2 – Module 5:

### Estimating Products

## 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 estimating products. 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 Grade 3 Mathematics learning materials you are using.

After going through this module, you are expected to:

- Estimate the product of 2- to 3-digit numbers and 1- to 2-digit numbers with reasonable results.

Enjoy your journey. Good luck!



## What I Know

**Direction:** Estimate each product. Write your answer on a separate sheet of paper.

$$\begin{array}{r} 1. \quad 73 \\ \times \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 87 \\ \times \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 74 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 473 \\ \times \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 668 \\ \times \quad 8 \\ \hline \end{array}$$

# Lesson 1

## Estimates the Product of 2- to 3-Digit Numbers and 1- to 2-Digit Numbers

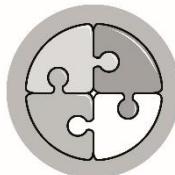
About 125 passenger jeepneys pass by a particular house in one hour. About how many passenger jeepneys would have passed by in 12 hours?

In answering this problem, you need to estimate the product by rounding off first the factor to its highest place value. (Remember not to round off 1- digit factor). Then multiply the resulting factors to get the estimated products.

Example:

$$\begin{array}{r} 125 \longrightarrow 100 \\ 12 \longrightarrow x \underline{10} \end{array}$$

\_\_\_\_\_ the number of passenger jeepneys that passed by.



### What's In

**Direction:** Round off the following digits. Write your answer on a separate sheet of paper.

a. to the nearest tens

$$159 \quad \underline{\hspace{2cm}}$$

$$238 \quad \underline{\hspace{2cm}}$$

$$142 \quad \underline{\hspace{2cm}}$$

$$2\ 385 \quad \underline{\hspace{2cm}}$$

b. to the nearest hundreds

258 \_\_\_\_\_

128 \_\_\_\_\_

235 \_\_\_\_\_

368 \_\_\_\_\_

912 \_\_\_\_\_

c. to the nearest thousands

3 456 \_\_\_\_\_

1 242 \_\_\_\_\_

7 821 \_\_\_\_\_

3 219 \_\_\_\_\_

1 245 \_\_\_\_\_



## What's New

**Direction:** Solve the problem.

Every day, 594 food packages are delivered to the Typhoon Pablo Operation Tulong Center. About how many food packages are being received by the Operation Tulong Center in 7 days?

When estimating products, round off each factor to its highest place value, then multiply.

Remember: Do not round off 1-digit factors

- Round off the factors to their highest place value.
- Multiply the resulting factors.

594

$$\begin{array}{r} x \\ \hline 7 \\ \hline \end{array}$$



Actual product

600

$$\begin{array}{r} x \\ \hline 7 \\ \hline \end{array}$$



Estimated product

4 158 is nearest to 4 200 so the answer is reasonable.



## What is It

a.

$$\begin{array}{r} 44 \\ \times 18 \\ \hline 352 \\ + 44 \\ \hline 792 \end{array} \quad \begin{array}{r} 40 \\ \times 20 \\ \hline 800 \end{array}$$

$\Downarrow$        $\Downarrow$

Estimated Product

$\Downarrow$

Actual product

b.

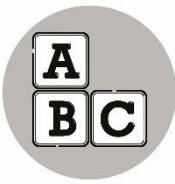
$$\begin{array}{r} 154 \\ \times 13 \\ \hline 462 \\ + 154 \\ \hline 2002 \end{array} \quad \begin{array}{r} 200 \\ \times 10 \\ \hline 2\,000 \end{array}$$

$\Downarrow$        $\Downarrow$

Estimated Product

$\Downarrow$

Actual product



## What's More

### Activity 1

Direction: Estimate each product. D Write your answer on a separate sheet of paper.

$$\begin{array}{r} 1. \quad 38 \\ \times \quad 23 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 89 \\ \times \quad 23 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 76 \\ \times \quad 44 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 179 \\ \times \quad 29 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 52 \\ \times \quad 48 \\ \hline \end{array}$$



## What I Have Learned

How do we estimate the product of 2-to-3- digit numbers multiplied by 1-to-2-digit numbers?

To estimate the product:

1. Round off either the multiplicand or multiplier or both to its greatest place value.
2. Multiply the rounded factors.

Remember: Do not round off 1-digit factor.



## What I Can Do

**Direction:** Estimate and solve the problem. Write your answer on a separate sheet of paper.

- In Sitio Magum, there are about 33 ponds, each having about 17 fishes. About how many fishes are there in all?



## Assessment

**Direction: A.** Estimate each product. Write your answer on a separate sheet of paper.

$$\begin{array}{r} 1. \quad 83 \\ \times \quad 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 122 \\ \times \quad 56 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 67 \\ \times \quad 41 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 76 \\ \times \quad 52 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 165 \\ \times \quad 37 \\ \hline \end{array}$$

**Direction: B.** Estimate and solve the problem. Write your answer on a separate sheet of paper.

- Nithan has 13 pencils in his pencil case. About how many pencils are there in all if Nithan has 26 pencil cases?



## *Additional Activities*

**Direction:** Estimate and solve the problem. Write your answer on a separate sheet of paper.

- Jeff's marbles are about three times as many as John's. John's marbles are as many as Nathaniel's marbles. Nathaniel has 126 marbles. About how many marbles does Jeff have?



# Answer Key

Additional Activity	Assessment	What I Can Do	What's More
Jeff has 300 marbles.	1. 600 fishes 2. 2800 3. 8 000 4. 6 000 5. 4 000 Problem 300 pencils	1. 600 fishes 2. 2800 3. 8 000 4. 6 000 5. 4 000 Problem 300 pencils	1. 800 2. 3 200 3. 2 500 4. 1 800 5. 6 000 Problem 4 000 shells
What I Know	What's in a. 160, 240, 140, 2 390 b. 300, 100, 200, 400, 900 c. 3 000, 1 000, 8 000, 3 000, 1 000, 1 000 Problem 3 000 shells	What I Know a. 160, 240, 140, 2 390 b. 300, 100, 200, 400, 900 c. 3 000, 1 000, 8 000, 3 000, 1 000, 1 000 Problem 3 000 shells	What I Know a. 160, 240, 140, 2 390 b. 300, 100, 200, 400, 900 c. 3 000, 1 000, 8 000, 3 000, 1 000, 1 000 Problem 3 000 shells
What I Can Do	Jeff has 300 marbles.	Jeff has 300 marbles.	Jeff has 300 marbles.

## *References*

Department of Education. (2015). Mathematics Teacher's Guide Grade 3, 1st ed. Pasay City, Department of Education.

Department of Education. (2015). Mathematics Learner's Material Grade 3, p. 159-160. 1st ed. Pasay City, Department of Education.

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