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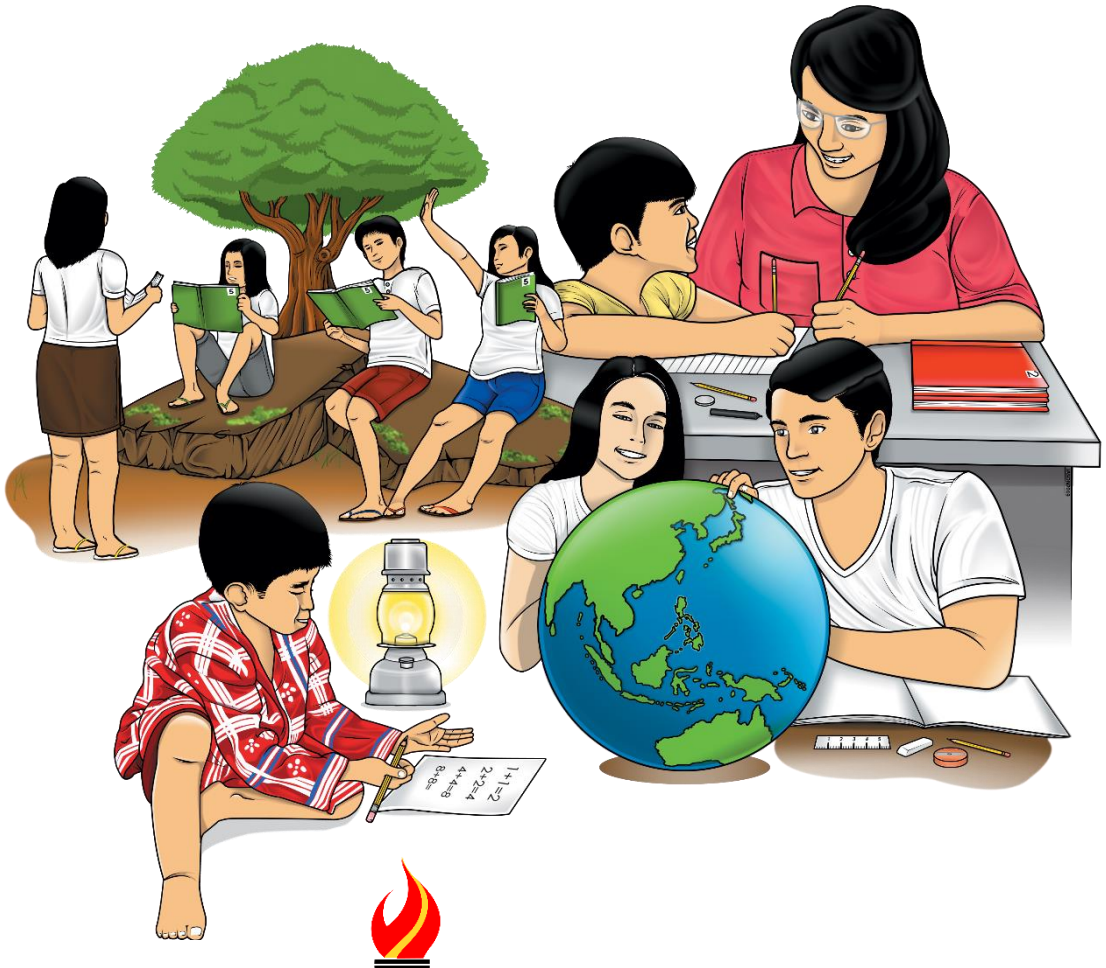
Mathematics

Quarter 2 – Module 5:
Estimating Products



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Alternative Delivery Mode
Quarter 2 – Module 5: Estimating Products
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Mathematics

Quarter 2 – Module 5:
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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 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.

1. 73
   x 5

2. 87
   x 6

3. 74
   x 4

4. 473
   x 6

5. 668
   x 8

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:

125 → 100

12 → x 10

_____ the number of passenger jeepneys that passed by.

What's In

Direction: Round off the following digits:

a. to the nearest tens

159 _____ 238 _____

142 _____ 2 385 _____

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 Typhon 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	600
x 7	x 7
4 158	4 200
⬇	⬇
Actual product	Estimated product

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

What is It

a.

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

Estimated Product

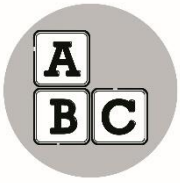
Actual product

b.

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

Estimated Product

Actual product



What's More

Activity 1

Direction: Estimate each product.

1. 38
   x 23

2. 76
   x 44

3. 52
   x 48

4. 89
   x 23

5. 179
   x 29

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.

- 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.

1. 83 x 9

2. 67 x 41

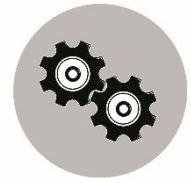
3. 165 x 37

4. 122 x 56

5. 76 x 52

Direction: B. Estimate and solve the problem.

- 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.

- 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

What's More

1. 800
2. 3 200
3. 2 500
4. 1 800
5. 6 000

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

What I Know

1. 350
2. 540
3. 280
4. 3 000
5. 5 600

Problem

4 000 shells

Additional Activity

Jeff has 300 marbles.

Assessment

1. 720
2. 2 800
3. 8 000
4. 6 000
5. 4 000

Problem

300 pencils

What I Can Do

1. 600 fishes

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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