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Lesson Exemplar for Mathematics

Quarter 2
Lesson
3

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Lesson Exemplar for Mathematics Grade 4
Quarter 2: Lesson 3 (Week 3)
SY 2024-2025

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Development Team

Writers:
- Lorelei B. Santelices (Ateneo de Naga University)
- Ma. Jeanette O. Naval, Ph.D. (Ateneo de Naga University)

Validators:
- Aurora B. Gonzales, Ph.D. (Philippine Normal University – Manila)
- Lalaine Ann F. Manuel, Ph.D. (Central Luzon State University)

Reviewed and Revised:
- PNU – RITQ Development Team

Management Team

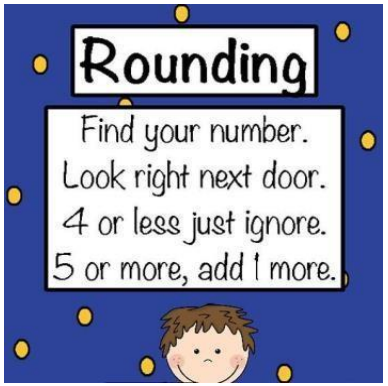
Philippine Normal University
Research Institute for Teacher Quality
SiMERR National Research Centre

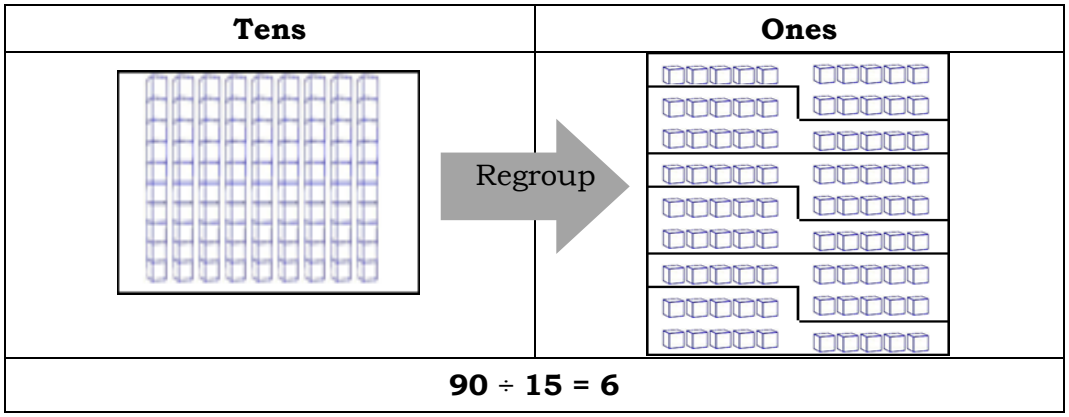
Every care has been taken to ensure the accuracy of the information provided in this material. For inquiries or feedback, please write or call the Office of the Director of the Bureau of Learning Resources via telephone numbers (02) 8634-1072 and 8631-6922 or by email at blr.od@deped.gov.ph.

MATHEMATICS / QUARTER 2 / GRADE 4

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	The learners should have knowledge and understanding of… • Multiplication of whole numbers with products up to 1 000 000, division of up to 4-digit numbers by up to 2-digit numbers, and the MDAS rules.
B. Performance Standards	By the end of the quarter, the learners are able to… • perform multiplication of whole numbers with products up to 1 000 000. • perform division of up to 4-digit numbers by up to 2-digit numbers. • perform different operations by applying the MDAS rules.
C. Learning Competencies and Objectives	1. Divide two numbers with and without regrouping 2- to 3-digit numbers by 2-digit numbers 2. Estimate the quotient when dividing 3- to 4-digit dividends by 1- to 2-digit divisors, by first estimating the dividends and divisors using multiples of 10. 3. Solve multi-step problems involving one or more of the four operations with results of calculations up to 1 000 000, including problems involving money.
D. Content	A. Multiplying Whole Numbers B. Estimating Products C. Problem Solving on Division
E. Integration	Principles of Values Education/Christian Living Education, Socio Economics, Conservation of Resources

II. LEARNING RESOURCES
Nivera, G.C. & Lapinid, M.C. (2014). Math for All Grade 4. Salesiana Books by Don Bosco Press, Inc. stickerandstaples.blogspot.com. (2012, March 12). Rounding Poem Freebies [Illustration]. Pinterest. https://www.pinterest.ph/pin/458100593337798395/ teacherfiles.com.(2014, December 21). Place Value Clip Art [Illustration]. Clip Art. https://www.teacheifiles.com/clip_aít_place_value.htm Other Learning Resources needed for this lesson: Division flash cards and manipulative

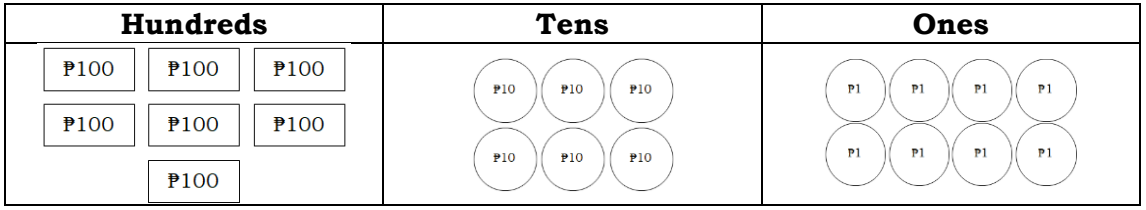
III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. Activating Prior Knowledge	**DAY 1** **1. Short Review** For Division: a. Use Division flash cards to review division facts. b. Play the game, "The Boat is Sinking." c. Recall the Division Process For Estimating Quotient: Recite the Rounding Rule.  For Problem Solving on Division: Recall the problem-solving steps: Think – Plan – Solve – Look Back **2. Feedback (Optional)**	Review for Day 1 and 2 (Division) Mechanics for the game "The Boat is Sinking": • The teacher will say "The boat is sinking, group yourselves into." (The teacher will pick a number less than or equal to the total number of pupils.) • The class will count the number of groups formed and the pupils who did not belong to any group (remainder) if there are. • The class will form and write a division sentence based on the groupings. • Example: 45 pupils grouped by 7s 6 groups 3 out (remainder) 45 ÷ 7 = 6 r.3 Review for Day 3 and 4 (Estimating Quotient) Review for Day 5 (Problem Solving on Division)
B. Establishing Lesson Purpose	**1. Lesson Purpose** Problem Opener: The cost of 18 books is 4 500 pesos. If the cost of each book is the same, find the cost of one book. 1) How will you determine the cost of 1 book?	For Day 1 and 2 Note: The pupils will not yet solve the problem since they were not yet taught how to divide by 2-digit numbers. They

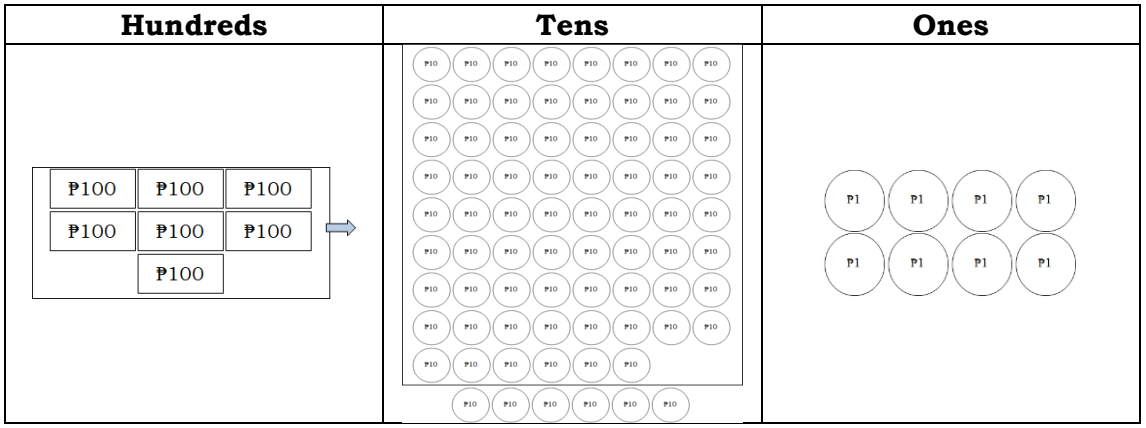
	We will learn division to be able to solve real-life division problems such as the one above. **2. Unlocking Content Vocabulary**	will just think of a strategy or determine the operation to be used to solve the problem.
C. Developing and Deepening Understanding	**DAY 1** **SUB-TOPIC 1: Dividing 2- to 3- Digit Numbers Without Remainder** **1. Explicitation** Ask the learners, how many groups of 15 are there in 90? *(The pupils can make repeated additions or skip counting, 15, 30, 45, 60, 75, 90)* Show the model below that illustrates the problem. Ask the learner to explain the meaning of the model. The following are the expected answers. Regroup 9 tens 9 tens = 90 ones There are 6 groups of 15 in 90  Then ask the learners to compute **90 ÷ 15** using long division. 6 15|90 Divide 90 ones by 15. − 90 15 x 6 ones = 90 tens 0 Subtract.	For Day 1 and 2 The teacher may use other available models or manipulatives such as place value discs. The aim of this activity is to prompt learners for the extension of their learning of division.

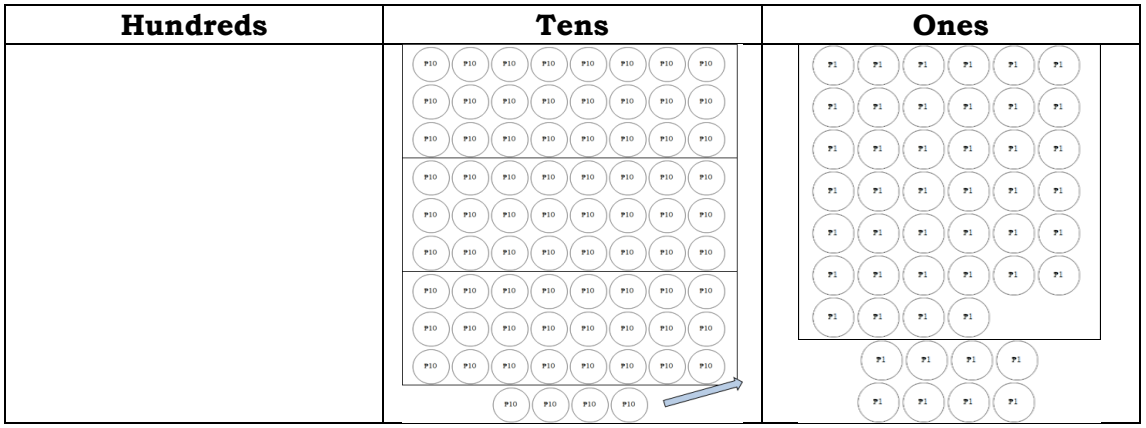
2. Worked Example

Use models to find the quotient.

₱768 ÷ 24



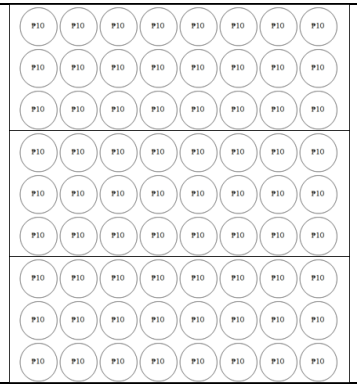
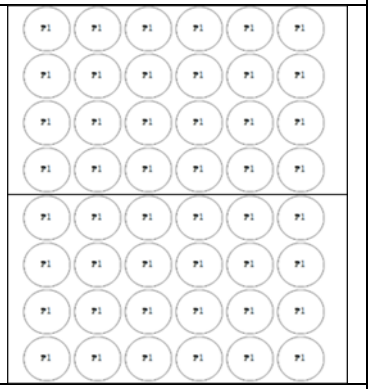




After this, lead the learners to the new lesson. The teacher discusses in detail the worked example.

Involve the learners in the discussion of the worked example like doing guided exercises.

Regroup 7 hundred.
7 hundreds = 70 tens

Hundreds	Tens	Ones
		
	3	2

₱ 768 ÷ 24 = 32

There are 2 groups of 24 ones.

Use long division to find the quotient.

```
      32
24 | 768
   - 72
     48      Bring down 8 ones. Divide 48 ones by 24.
   - 48      24 x 2 ones = 48 ones
      0      Subtract.
```

3. Lesson Activity

Use long division to find the quotient.

a. 85 ÷ 17
b. 966 ÷ 46

Answer Worksheet No. 1

DAY 2

SUB-TOPIC 2: Dividing 2- to 3-Digit by 2-Digit Numbers with Remainder

1. Explicitation

Go over answers to Worksheet No. 1 as a springboard to the new lesson.

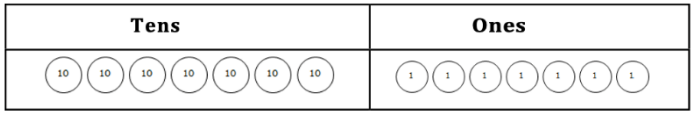
Drill on the division with remainder. Find the complete quotient.

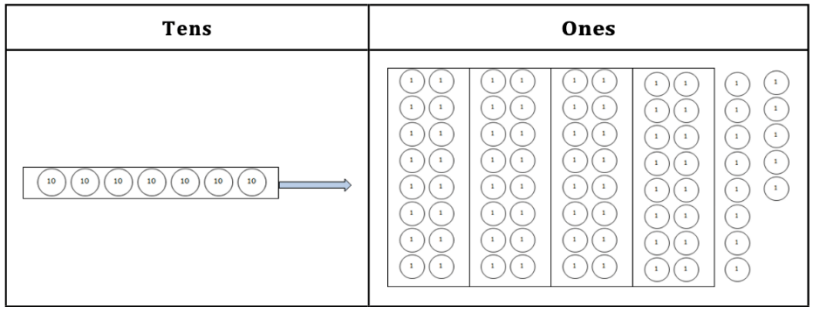
1. 10 ÷ 3
2. 15 ÷ 4

2. Worked Example

Divide using pictorial representation.

77 ÷ 16





There are 4 groups of 16 in 77 and a remainder of 13.

77 ÷ 16 = 4 r.13

Use long division to find the complete quotient.

Recall: DMSB (Divide – Multiple – Subtract – Bring Down)

6 507 ÷ 36

```
     1
36|4507
  – 36
     9
```

Divide 45 hundreds by 36.
36 x 1 hundred = 36 hundreds
Subtract.

```
     12
36|4507
  – 36
     90
  – 72
     18
```

Bring down 0 tens. Divide 90 tens by 36.
36 x 2 tens = 72 tens
Subtract.

```
     125
36|4507
  – 36
     90
  – 72
     187
  – 180
       7
```

Bring down 7 ones. Divide 187 ones by 36.
36 x 5 ones = 180 ones
Subtract.
↪ **remainder**

4,507 ÷ 36 = 125 r.7

Regroup 7 tens.
7 tens = 70 ones
Count how many groups of 16ones there are 77.

Note:
Based on the responses or solution of pupils, the teacher will discuss the common errors committed pupils.

Recall that when the first number is not exactly divisible by the second number, there is a remainder.

	3. Lesson Activity Find the quotient of the following numbers using your preferred strategy. 1. 78 ÷ 25 2. 914 ÷ 49 3. 389 ÷ 23	Answer Worksheet No. 2
	DAY 3 **SUB-TOPIC 3: Estimating Quotient** **1. Explicitation** Go over answers to Worksheet No. 1 as a springboard to the new lessons. **Guide Questions:** 1. What is meant by estimation? 2. How would you estimate the quotient of two numbers? 3. Try to estimate the quotient of 73 and 5. **2. Worked Example** Solve the following problem. a. A farm harvested 675 kilograms of Lanzones. About how many packs of Lanzones can be made if each must contain 7 kilograms? Let us follow a systematics way of estimating quotients. • Estimate the dividend by rounding to the highest place value. ○ What is the highest place value in the dividend? ○ What is the estimated value of the dividend? 675 ≈ ___ • Then, divide to get the estimated quotient. • Ask the pupils to give the answer in complete sentence. ○ Therefore, _____ b. A drip from a leaky faucet can waste 4 950 liters of water in a month (30 days). About how many liters of water are wasted in a day? • Estimate the dividend and divisor by rounding to the highest place. ○ What is the highest place value in the dividend? 4950 ≈ __ ○ What is the highest place value in the divisor? ○ What is the estimated value of the divisor? 30 ≈ ___ • Then, divide to get the estimated quotient. • If the estimated dividend is not divisible by the estimated divisor, look for the closest number that can be easily divided by the divisor.	Note: Based on the responses or solution of pupils, the teacher will discuss the common errors committed by pupils The teacher will ask and discuss with the pupils which among the answers is the best estimate. The estimated value of the dividend is 700. 700 ÷ 7 = 100 Answer: About 100 packs of Lanzones can be made. 5 000 is not divisible by 30. If the estimated dividend is not divisible by by the estimated divisor, look for the closest number that can be easily divided by the divisor. 4 800 is the closest number divisible by 30. 4 800 ÷ 30 = 16 Answer: About 16 liters of water is wasted in a day.

	• Ask the pupils to give the answer in the complete sentences.
	  ○ Therefore, _____
	  ○ How do you conserve resources such as water?
	
	3. Lesson Activity
	1. 614 ÷ 65
	2. 7 509 ÷ 8
	3. 399 ÷ 4
	4. 5 286 ÷ 19
	5. 9 300 ÷ 34
	What is the importance of knowing how to estimate?
	
	DAY 4
	SUB-TOPIC 4: Problem Solving on Division
	1. Explicitation
	Go over answers to Worksheet No. 1 as a springboard to the new lesson.
	
	Solve the problem by following the steps in problem solving.
	A store earned 5 500 pesos on Monday and 6 780 pesos on Tuesday. On the average, how much did it earn each day?
	
	Step 1: Think
	Given: 5 500 pesos on Monday; 6 780 on Tuesday
	Asked: On the average, how much did it earn each day?
	
	Step 2: Plan
	Hidden Question: What is the total earnings for 2 days?
	Number Sentence: (5 500 + 6 780) ÷ 2 = n
	
	Step 3: Solve
	5 500 + 6 780 = 12 280
	12 280 ÷ 2 = 6 140
	Answer: On the average, the store earned 6 140 pesos each day.
	
	Step 4: Look Back
	Review your answer. Is it correct?
		Answer Worksheet No. 3
		
		Note:
		Based on the responses or solution of pupils, the teacher will discuss the common errors committed by pupils.

	2. Worked Example Ask the pupils on how they will go about the problem. What are the steps in problem solving? Angela has 12 days left to red a 260-page book for her book report. She has already read 60 pages. How many pages should she read each day to finish the book on time? **3. Lesson Activity** Solve the following problems. 1. A team received cash prizes for winning in 3 games. They received 300 pesos, 200 pesos and another 200 pesos as the prizes. There are 4 pupils in the team. They divide the money equally among themselves. How much will each pupil receive? 2. 750 pupils are going on a field trip. Two teachers are assigned for every group of 30 pupils. How many teachers are joining the trip? 3. A baker has 5 trays of eggs. Each tray has 30 eggs. He uses 8 eggs for baking a cake. How many cakes can he bake? How many eggs are left over?	The teacher may ask the pupils to work in pairs or in groups in solving the problems. Answer Worksheet No. 4
D. Making Generalizations	**DAY 4** **1. Learners' Takeaways** • Which strategy do you find easy to perform? In what situations can you use division? • What values did you learn from the lesson? **2. Reflection on Learning** **Reflect: 3-2-1** 3 — Things I learned 2 — Things I found interesting 1 — Question I have	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION				NOTES TO TEACHERS
A. Evaluating Learning	**DAY 5** **1. Formative Assessment** A. Find the quotient. 1. 62 ÷ 13 2. 409 ÷ 66 B. Estimate the quotient. 1. 6 421 ÷ 6 2. 469 ÷ 18 C. Solve the following problem. A school receives a check worth 15,000 pesos and a check worth 20,000 for scholarship. Can the total amount be divided equally among 18 scholars? **2. Homework (Optional)**			Answer Key: A. Dividing by 2-Digit Numbers B. Estimating Quotients C. Problems Solving on Division Teachers may encourage learners to have a quiz notebook to monitor learners' academic progress. The quiz notebook may also serve as a homework notebook.
B. Teacher's Remarks	*Note observations on any of the following areas:*	**Effective Practices**	**Problems Encountered**	The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, learner engagement, and other related stuff. Teachers may also suggest ways to improve the different activities explored/lesson exemplar.
	strategies explored			
	materials used			
	learner engagement/ interaction			
	others			
C. Teacher's Reflection	*Reflection guide or prompt can be on:* • *principles behind the teaching* *What principles and beliefs informed my lesson?* *Why did I teach the lesson the way I did?*			Teacher's reflection in every lesson conducted/facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.

	• *students* *What roles did my students play in my lesson?* *What did my students learn? How did they learn?* • *ways forward* *What could I have done differently?* *What can I explore in the next lesson?*	