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Lesson Exemplar for Mathematics

Quarter 4
Lesson

6

Lesson Exemplar for Mathematics Grade 4
Quarter 4: Lesson 6 (Week 6)
SY 2024-2025

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MATHEMATICS / QUARTER 4 / GRADE 4

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	<i>The learner should have knowledge and understanding of decimal numbers and their relationship to fractions.</i>
B. Performance Standards	By the end of the quarter, the learners are able to convert decimal numbers to fractions and fractions (with denominators 10 or 100) to decimals.
C. Learning Competencies and Objectives	Convert decimal numbers to fractions, and fractions with denominators 10 or 100 to decimals.
D. Content	Conversion of Decimals to Fractions Conversion of Fractions with Denominators 10 or 100 to Decimals
E. Integration	Accuracy in taking medicine, Health and Environment

II. LEARNING RESOURCES
Atlantic Business Network. (n.d.). Digital balance. <i>Atlantic Business Network</i> . http://atlanticbiznet.ca/product/digital-balance/ Drugs.com. (n.d.). G 0.5 pill – white five-sided, 9mm. <i>Drugs.com</i> . https://www.drugs.com/imprints/g-0-5-11408.html Fist Philippine Scales, Inc. (n.d.). Fuji 5 kg table scale, small, mechanical dial type, anti bacterial powder coat, best for home and kitchen, flat plate, FTF-5J. <i>Timbangan.ph</i> . https://shop.timbangan.ph/products/ftf-5j Frayer Model Diagram. (n.d.). <i>Abetances Portfolio Weebly</i> . https://abetancesportfolio.weebly.com/frayer-model--vocab.html

III. TEACHING AND LEARNING PROCEDURE

NOTES TO TEACHERS

A. Activating Prior Knowledge

DAY 1

1. Short Review

A. Write the following numbers in fraction form and decimal form.

word form	fraction form	decimal form
1. two-tenths		
2. five-tenths		
3. seven hundredths		
4. eighteen hundredths		
5. ninety-nine hundredths		

B. Write the decimal form in Part A in the Place Value Chart below.

	Tens	Ones	.	Tenths	Hundredths
1)					
2)					
3)					
4)					
5)					

2. Feedback (Optional)

We learned that fractions and decimals are related. Let us review how to write fractions and decimals in symbols.

Answer to the Short Review Activity:

A.

word form	fraction form	decimal form
1. two-tenths	$\frac{2}{10}$	0.2
2. five-tenths	$\frac{5}{10}$	0.5
3. seven hundredths	$\frac{7}{100}$	0.07
4. eighteen hundredths	$\frac{18}{100}$	0.18
5. ninety-nine hundredths	$\frac{99}{100}$	0.99

B.

	Tens	Ones	.	Tenths	Hundredths
1)		0	.	2	
2)		0	.	5	
3)		0	.	0	7
4)		0	.	1	8
5)		0	.	9	9

B. Establishing Lesson Purpose	1. Lesson Purpose a) What do you notice about the fractions in the Short Review Exercise Part A? b) How is the decimal form related to the denominator of the fraction form? 2. Unlocking Content Area Vocabulary	a) Expected responses from the learners: • The numerator has either one or two digits. • The denominator is either ten or one hundred • The numerators are smaller than the denominators. • Fractions given are proper fractions. b) Expected responses from the learners: • When the denominator is ten, there is only one decimal place. • When the denominator is one hundred, there are two decimal places.
C. Developing and Deepening Understanding	SUB-TOPIC 1: Conversion of Decimal to Fraction 1. Explicitation A. Decimal number with 1 decimal digit: Let us discover how to convert a decimal number with 1 decimal digit to fraction. Example 1: Convert 0.4 to fraction. How do you write 0.4 in word form? four-tenths How do you write four-tenths in fraction form? $\frac{4}{10}$ Example 2: Convert 0.8 to fraction. How do you write 0.8 in word form? eight-tenths How do you write eight-tenths in fraction form? $\frac{8}{10}$ In general, how do you convert a decimal with 1 decimal digit to fraction? To convert the decimal to fraction, write the decimal digit in the numerator and write 10 in the denominator.	Remind the learners that the denominator depends on the values of how decimals are written, that is 0.1 (one tenth) is equivalent to $\frac{1}{10}$.

B. Decimal number with 2 decimal digits:
 Let us discover how to convert a decimal number with 2 decimal digits to fraction.
 Example 1: Convert 0.03 to fraction.
 How do you write 0.03 in word form? three hundredths
 How do you write three hundredths in fraction form? $\frac{3}{100}$

Example 2: Convert 0.25 to fraction.
 How do you write 0.25 in word form? twenty-five hundredths
 How do you write twenty-five hundredths in fraction form? $\frac{25}{100}$

In general, how do you convert a decimal with 2 decimal digits to fraction?
 To convert the decimal to fraction, write the decimal digits in the numerator and write 100 in the denominator.

DAY 2

2. Worked Example

- a. Convert the following decimals to fraction:
 - i) 0.6
 - ii) 0.9
- b. Convert the following decimals to fraction:
 - i) 0.05
 - ii) 0.48

3. Lesson Activity

Answer the conversion problems.

- 1) A meter stick measures 1 meter. 1 meter is equal to 100 centimeters. 0.1 (one-tenth) of a meter is equal to 10 centimeters. Convert the decimal to fraction.

$$0.1 = \frac{1}{10}$$

- 2) Alprazolam 0.5 milligram is used in the treatment of anxiety and panic disorder. Convert the decimal to fraction.

$$0.5 = \frac{5}{10}$$

Decimal number with 2 decimal digits:

To convert the decimal to fraction, write the decimal digits in the numerator and write 100 in the denominator.

Remind the learners that the denominator depends on the values of how decimals are written, that is 0.11 (eleven hundredths) is equivalent to $\frac{11}{100}$.

Let the learners recall first the rules in converting decimals to fractions. This may be done orally and repeatedly until the learners recalled the rules.

Note to teacher:

Answer to Worked Example:

- a. i) $\frac{6}{10}$ ii) $\frac{9}{10}$
- b. i) $\frac{5}{100}$ ii) $\frac{48}{100}$

Note to Teacher on the Lesson Activity:

- a) The teacher may bring an actual meter stick to show the students the measurements using the meter stick.
- b) The teacher may show a picture of the medicine pill.

- 3) A tablespoon is equivalent to about 0.75 milliliter. 0.75 milliliter is about 15 drops. Convert the decimal to fraction.

$$0.75 = \frac{75}{100}$$

Note:

Since $\frac{75}{100}$ or $\frac{3}{4}$ mL is equal to 15 drops, then 1 mL is equivalent to 20 drops and a teaspoon is about 5 mL. Using the materials brought, the teacher will show whether the teaspoon is accurate or not.

DAY 3

SUB-TOPIC 2: Conversion of Fractions with Denominators 10 or 100 to Decimals

1. Explicitation

Let us review how to read and write fractions and decimals, try writing the following in symbols:

word form	fraction form	decimal form
1) three-tenths		
2) seven-tenths		
3) eight-tenths		
4) six hundredths		
5) fifteen hundredths		
6) fifty hundredths		

1. What do you observe about the fraction forms and decimal forms of the numbers from 1-3?
2. What do you observe about the fraction forms and decimal forms of the numbers from 4-6?
3. How do you write fractions (tenths) in decimal form?
4. How do you write fractions (hundredths) in decimal form?



- c) The teacher may bring material like teaspoon (commonly used at home, medicine cup and dropper). In this lesson, the teacher will use the dropper in showing 15 drops is equivalent to 0.75 milliliter.
- d) The teacher may also let learners use the materials brought in measuring (e.g. meter stick, droppers, medicine caps etc.) to foster authentic learning.

Value integration can be discussed when taking medicine, students should be very careful in measuring or following the prescribed volume or amount in taking the medicine. Let the learners share the importance of being accurate in following the prescriptions and procedures of doctors.

Note:

- To write tenths in decimal form, write the numerator in the tenths place.
- To write hundredths in decimal form, write the tens digit in the numerator in the tenths place while the ones digit in the hundredths place.
- If the numerator is a 1-digit number, write zero in the tenths place.

2. Worked Example

a) Convert the following fractions to decimals:

i) $\frac{4}{10}$

ii) $\frac{9}{10}$

b) Convert the following fractions to decimals:

i) $\frac{7}{100}$

ii) $\frac{65}{100}$

DAY 5**3. Lesson Activity**

Answer the conversion problems.

- 1) Using an analog weighing scale, sugar has a mass of $\frac{5}{10} \text{ kg}$. What is the mass of the sugar using a digital weighing scale?

$$\frac{5}{10} = 0.5$$

- 2) I have a 1 000-peso bill. I exchanged it with 100 pieces of 10-peso coins. $\frac{25}{100}$ of ₱1 000 is equivalent to 25 pieces of 10-peso coins. Convert the fraction to decimal.

$$\frac{25}{100} = 0.25$$

- 3) How many years are there in a century?
At present (2024), we are in the 21st Century.
By 2100 we will be in the 22nd century.
How many more years before we reach the 22nd Century?
We will be counting 76 more years out of 100 or $\frac{76}{100}$.
Convert the fraction to decimal.

$$\frac{76}{100} = 0.76$$

Answers:

word form	fraction form	decimal form
1) three-tenths	$\frac{3}{10}$	0.3
2. seven-tenths	$\frac{7}{10}$	0.7
3. eight-tenths	$\frac{8}{10}$	0.8
4. six hundredths	$\frac{6}{100}$	0.06
5. fifteen hundredths	$\frac{15}{100}$	0.15
6. fifty hundredths	$\frac{50}{100}$	0.50

1. Expected answers of learners for 1-3:
- The denominator of the fractions is 10.
 - There is only one decimal place.
2. Expected answers of learners 4-6:
- The denominator of the fractions is 100.
 - There are two decimal places.

Note to teacher:

Responses to Worked Example

a. i) $\frac{4}{10}$ ii) $\frac{9}{10}$

b. i) $\frac{7}{100}$ ii) $\frac{65}{100}$

- 1) The teacher may show pictures of an analog and digital weighing scale



- 2) The teacher may ask the pupils how much is $\frac{25}{100}$ of ₱1 000.

Values Integration for letter C:
The teacher may ask: How old are you now? Do you have relatives or friends whose age is at least 85 to 90 years?

Reflection questions:

- a. What do you think these people did to reach that age for them to be able to go to the next century (from 20th to 21st century)?
- b. Would you like to reach another century? How will you be able to do it? In what ways?

Expected responses from learners:

- eating healthy foods like fruits and vegetables
- regular exercise
- happy and clean environment

D. Making Generalizations	DAY 5 1. Learners' Takeaways Use the Frayer Diagram to show what you learned. Frayer Model Diagram 2. Reflection on Learning Give instances when these lessons can be of help to you.	Note to teacher: Ask the pupils to write the specific concept or lesson they learned from the topics in the oval at the middle. Once done by the students, the teacher may choose or may ask for some volunteers to share their responses.
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IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		NOTES TO TEACHERS
A. Evaluating Learning	1. Formative Assessment A. Convert the fraction to decimal. 1) $\frac{1}{10}$ 2) $\frac{4}{10}$ 3) $\frac{9}{100}$ 4) $\frac{13}{100}$ 5) $\frac{82}{100}$ B. Convert the decimal to fraction. 1) 0.2 2) 0.7 3) 0.08 4) 0.70 5) 0.48 2. Homework (Optional)	Answers: A. 1) one-tenth 2) four-tenths 3) nine hundredths 4) thirteen hundredths 5) eighty two hundredths B. 1) $\frac{2}{10}$ 2) $\frac{7}{10}$ 3) $\frac{8}{100}$ 4) $\frac{70}{100}$ 5) $\frac{48}{100}$

B. Teacher's Remarks	<i>Note observations on any of the following areas:</i>	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	<i>Reflection guide or prompt can be on:</i> <u>principles behind the teaching</u> <i>What principles and beliefs informed my lesson? Why did I teach the lesson the way I did?</i> <u>students</u> <i>What roles did my students play in my lesson? What did my students learn? How did they learn?</i> <u>ways forward</u> <i>What could I have done differently? What can I explore in the next lesson?</i>			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.