

5

Lesson Exemplar for Mathematics 5

Quarter 2
Lesson

3

Lesson Exemplar for Mathematics Grade 5
Quarter 2: Lesson 3 Week 3
SY 2024-2025

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MATHEMATICS/QUARTER 2/GRADE 5

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES

A. Content Standards	<i>The learner should have knowledge and understanding of decimal numbers with decimal parts up to ten thousandths.</i>
B. Performance Standards	<i>By the end of the quarter, the learners are able to compare, order, and round decimals to the nearest one thousandth.</i>
C. Learning Competencies and Objectives	- Determine: - the place value to ten thousandths of a digit in a given decimal number, - the value of a digit, and - the digit of a number, given its place value. - Read and write decimal numbers with decimal parts to ten thousandths.
C. Content	Decimal Numbers with Decimal Parts up to Ten Thousandths
D. Integration	Counting Money

II. LEARNING RESOURCES

Base 10 Blocks (Thousands)-Kaleidospia [Photograph].<https://kaleidospia.com/products/base-10-blocks-thousands>

International Bank Note Society. (n.d.). Title of the article. Retrieved from https://www.theibns.org/joomla/index.php?option=com_content&view=article&id=862&catid=13&Itemid=51

Philippine ten-peso coin, Wikipedia [Photograph]. https://en.wikipedia.org/wiki/Philippine_ten-peso_coin

Place Value. Winston-Salem/Forsyth County School. Retrieved March 19, 2024, from <https://www.wsfcs.k12.nc.us/cms/lib/NC01001395/Centricity/Domain/9064/5th%20grade%20math%20website.pdf>

Ten-Centavo Philippine Coin on the White Background, Stock Photo 123RF [Photograph]. https://www.123rf.com/photo_3583166_ten-centavo-philippine-coin-on-white-background.html

"Which balance measurement can achieve a precision scales 0.0001 g?" (n.d.). Want Balance. Retrieved from https://www.wantbalance.com/new_detail/nid/85832.html

505 Base 10 Blocks Royalty-Free Images, Stock Photos Shutterstock [Photograph].
<https://www.shutterstock.com/zh/search/base-10-blocks?page=2>

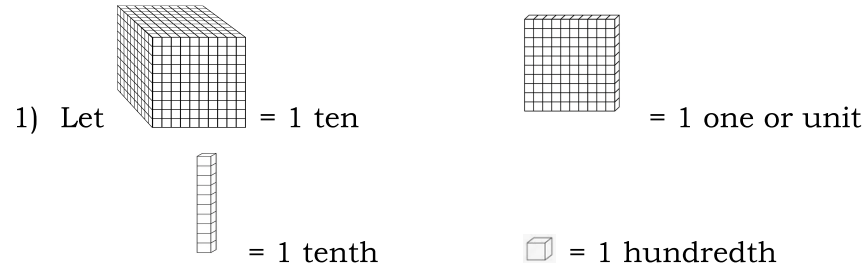
1,633 One Peso Coin Images, Stock Photos, 3D Objects Shutterstock[Photograph].
<https://www.shutterstock.com/zh/search/philippine-peso-coin>

Other Resources needed: Blocks, Bills and Coins, Place Value Chart, Place Value Disk (if available)

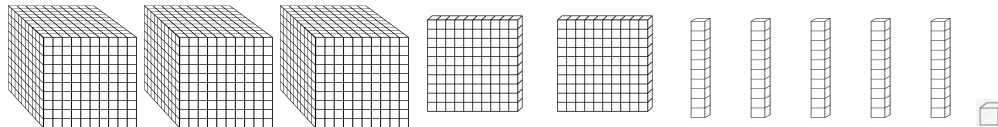
III. TEACHING AND LEARNING PROCEDURE

A. Activating Prior Knowledge

Day 1 Short Review



What decimal number is represented by the set of blocks?



- 2) Represent 27.30 pesos using bills and coins.
 3) Write the following decimals in the Place Value Chart below.
 a) 5.2 b) 0.06 c) 43.48

	Tens	Ones	.	Tenths	Hundredths

NOTES TO TEACHERS

Review how to read and write decimals up to hundredths of a place.

Answers to the Short Review Activity:

1) 32.51



2)



3)

	Tens	Ones	.	Tenths	Hundredths
a)		5	.	2	

	<table><tr><td>a)</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>b)</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>c)</td><td></td><td></td><td></td><td></td><td></td></tr></table>	a)						b)						c)						<table><tr><td>b)</td><td></td><td>0</td><td>.</td><td>0</td><td>6</td></tr><tr><td>c)</td><td>4</td><td>3</td><td>.</td><td>4</td><td>8</td></tr></table>	b)		0	.	0	6	c)	4	3	.	4	8																																									
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B. Establishing Lesson Purpose	1. Lesson Purpose a) What do you think is the place value next to hundredths? <table><tr><td>Millions</td><td>Hundred Thousands</td><td>Ten thousands</td><td>Thousands</td><td>Hundreds</td><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>?</td></tr></table> b) What do you think is the place value next to thousandths? <table><tr><td>Millions</td><td>Hundred Thousands</td><td>Ten Thousands</td><td>Thousands</td><td>Hundreds</td><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>Thousandths</td><td>?</td></tr></table> c) How would you write the following decimals in the place value chart? i) 0.016 ii) 40.9521 <table><tr><td>Given</td><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>Thousandths</td><td>Ten Thousandths</td></tr><tr><td>i)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>ii)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Millions	Hundred Thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	?	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	?	Given	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths	i)								ii)								Answers: a) Thousandths b) Ten Thousandths c) <table><tr><td>Given</td><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>Thousandths</td><td>Ten Thousandths</td></tr><tr><td>i)</td><td></td><td>0</td><td>.</td><td>0</td><td>1</td><td>6</td><td></td></tr><tr><td>ii)</td><td>4</td><td>0</td><td>.</td><td>9</td><td>5</td><td>1</td><td>2</td></tr></table>	Given	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths	i)		0	.	0	1	6		ii)	4	0	.	9	5	1	2
Millions	Hundred Thousands	Ten thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	?																																																															
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	The constant π has an approximate value of 3.1416. This number is read as “Three and one thousand four hundred sixteen ten thousandths”. 2. Unlocking Content Area Vocabulary The constant π has an approximate value of 3.1416. Decimal comes from the Latin word <i>decimus</i> which means tenth. Place Value is the position of a digit in a number. Value refers to what a digit is worth in a given number. The value of a digit is based on its place value.	Ask the learners if they recognize the term and explain that it will be covered in Grade Six. The constant π is related to Circles.																																
C. Developing and Deepening Understanding	SUB-TOPIC 1: Place Value and Value of a Digit in a Decimal Number up to Ten Thousandths 1. Explicitation Each digit in a number corresponds to a place value and has a value determined by its place. The place value next to hundredths is thousandths and the place value next to it is ten thousandths. Example 1: Write 0.693 in the place value chart and determine the place value and value of each digit. <table><tr><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>Thousandths</td></tr><tr><td></td><td>0</td><td>.</td><td>6</td><td>9</td><td>3</td></tr></table> Example 2: Write 4.1707 in the place value chart and determine the place value and value of each digit.	Tens	Ones	.	Tenths	Hundredths	Thousandths		0	.	6	9	3	Ask learners to answer the given examples. This can also be done through group activity. Example 1 <table><tr><td>Tens</td><td>Ones</td><td>.</td><td>Tenths</td><td>Hundredths</td><td>Thousandths</td></tr><tr><td></td><td>0</td><td>.</td><td>6</td><td>9</td><td>3</td></tr></table> Place Value and Value of each digit in 0.693: 0.693 <table><tr><td>Place Value</td><td>Value</td></tr><tr><td>tenths</td><td>0.6</td></tr><tr><td>hundredths</td><td>0.09</td></tr><tr><td>thousandths</td><td>0.003</td></tr></table> Example 2:	Tens	Ones	.	Tenths	Hundredths	Thousandths		0	.	6	9	3	Place Value	Value	tenths	0.6	hundredths	0.09	thousandths	0.003
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Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths

Example 3: Write 5.555 in the place value chart and determine the place value and value of each digit.

Ones	.	Tenths	Hundredths	Thousandths

Day 2

2. Worked Example

Try the following activity:

Recall the Place Value Chart then determine the place value and value of the underlined digit.

- 6.987
- 0.345
- 2.4361
- 1.9632

Answers:

- 8 - hundredths, 0.08
- 5 - thousandths, 0.005
- 4 - tenths, 0.4
- 2 - ten thousandths, 0.0002

Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths
	4	.	1	7	0	7

4.1707	Place Value	Value
ones	ones	4
tenths	tenths	0.1
hundredths	hundredths	0.07
thousandths	thousandths	0.000
ten thousandths	ten thousandths	0.0007

Example 3:

Ones	.	Tenths	Hundredths	Thousandths
5	.	5	5	5

5.555	Place Value	Value
Ones	Ones	5
Tenths	Tenths	0.5
Hundredths	Hundredths	0.05
Thousandths	Thousandths	0.005

The teacher may also explain that:

Ones	.	Tenths	Hundredths	Thousandths
5	.	5	5	5



Place value
increases 10x
with each shift
to the **left**.



Place value
decreases 10x
with each shift
to the **right**.

3. Lesson Activity

Write the correct answer on the line provided.

1. In 23.9872, digit 8 is in the _____ place.
The value of digit 8 is _____.
2. In 67.3459, digit 9 is in the _____ place.
The value of digit 9 is _____.
3. In 0.3457, digit 3 is in the _____ place.
The value of digit 3 is _____.
4. In 1.092, digit 1 is in the _____ place.
The value of digit 1 is _____.
5. In 21.345, digit 5 is in the _____ place.
The value of digit 5 is _____.

Day 3

SUB-TOPIC 2: Identifying the Digit Given Its Place Value

1. Explicitation

Each digit in a number corresponds to a place value.

Fill-in the missing place values in the chart.

Hundreds	?	Ones	.	?	?	Thousandths	?
----------	---	------	---	---	---	-------------	---

Give the digit corresponding to the indicated place value.

- | | |
|------------|-----------------|
| a) 8.564 | thousandths |
| b) 0.723 | tenths |
| c) 16.2011 | tens |
| d) 4.6529 | ten thousandths |

2. Worked Example

Answer the following:

Hence, the digit 5 in one place is ten times the digit 5 in the tenth place, while the digit 5 in the thousandth place is one-tenth of the digit 5 in the hundredth place.

See Learning Activity Sheet 1

Answers:

1. hundredths; 0.08
2. ten thousandths; 0.0009
3. tenths; 0.3
4. ones; 1
5. thousandths; 0.005

SUB-TOPIC 2

Answers to Explicitation

Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths
----------	------	------	---	--------	------------	-------------	--------------------

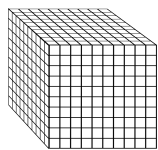
- a) 4
- b) 7
- c) 1
- d) 9

Answers to Worked Example

Example 1

- a) 6; 7
- b) 0.06; 0.007

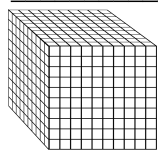
	Example 1: Given the decimal 38.0672: a) What is the digit in the hundredths place? in the thousandths place? b) What is the value of the digit in the hundredths place? in the thousandths place? Example 2: Given the decimal 987.1563: a) What is the digit in the hundreds place? in the ten thousandths place? b) What is the value of the digit in the hundreds place? in the ten thousandths place? 3. Lesson Activity Write the correct answer on the line provided. 1. In 132.8765, digit _____ is in the thousandths place. 2. In 1.6534, digit _____ is in the ten thousandths place. 3. In 23.7654, digit _____ is in the ones place. 4. In 574.8643, digit _____ is in the tens place. 5. In 34.9876, digit _____ is in the hundredths place. Day 4 SUB-TOPIC 3: Reading and Writing Decimal Numbers Up to Ten Thousandths 1. Explicitation A. Study the illustration then fill-in the blank with the correct number.	Example 2 a) 9; 3 b) 900; 0.0003 See Learning Activity 2 Answers: 1. 6 2. 4 3. 3 4. 7 5. 8 It is important to note that in this part, the base ten blocks represent different values. A block or cube represents ones, a flat represents tenths, a rod or long represents hundredths and a unit represents thousandths. Answer to Explication A. 0.004 (four thousandths)
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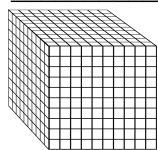


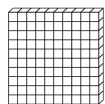
This block is made up of 1,000 units.

 This is a unit. It is 0.001 (one thousandth) of a block. Therefore,

 is _____ of a block.



This time, if  represents 1 whole, then,



= 1 tenth



= 1 hundredth

and



= 1 thousandth

Decimal numbers may be written in figures/numerals or words.

To read a decimal number, read the whole number part first then read the decimal point as “and”, finally, say the place value of the last digit.

Example: 45.082 is read as “forty-five and eighty-two thousandths”.

B. Write the following numbers in figures/numerals.

- a) Twenty-five thousandths _____
- b) One hundred fifty thousandths _____
- c) Three and two thousandths _____
- d) Five and eighty-two thousandths _____
- e) Forty-four and ninety-two thousandths _____

C. A millimeter is 0.001 of a meter.

Show 1mm or 0.001m using a meter stick and ruler.

- a) Can you think of objects measuring about 0.001 meter?
- b) How would you write 0.001 in words?

B.

- a) 0.025
- b) 0.150
- c) 3.002
- d) 5.082
- e) 44.092

C.

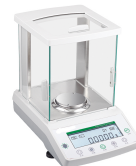
- a) sharp pencil point; tip of a sewing needle
- b) one thousandth

D. a) heavier

- b) feather, cotton, grain of sand, powder
- c) one ten thousandth

D. Analytical balances can usually achieve an accuracy of 0.0001 gram. Analytical balances are designed for high precision and precision weighing and are used in scientific, educational and industrial laboratories.

- Is 1 milligram heavier or lighter than 0.0001 gram?
- Can you think of objects that can weigh about 1 mg?
- How would you write 0.0001 in words?



E. Write the following in figures/numerals:

- Seven ten thousandths

- Twelve and eighty-six ten thousandths

- One hundred nine ten thousandths

- One and twenty-six ten thousandths

- Twelve and nine hundred thirty-three ten thousandths

2. Worked Examples

A. Read and answer the following:



A 1 000 peso-bill can be exchanged with 1 000 one-peso coins.

- What is one thousandth of 1 000 pesos?
- How much is 75 thousandths of 1 000 pesos?

B. Write the numbers in the Place Value Chart then write in words.

- 0.057
- 702.316
- 45.1922

E.

- 0.0007
- 12.0086
- 0.0109
- 1.0026
- 12.0933

Answers to Worked Examples

A.

- 1 peso
- 75 pesos

B.

Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths
		0	.	0	5	7	
7	0	2	.	3	1	6	
	4	5	.	1	9	2	2

Word Form

- fifty-seven thousandths
- seven hundred two and three hundred sixteen thousandths
- forty-five and one thousand nine hundred twenty-two ten thousandths

	<table><tr><th>Hundreds</th><th>Tens</th><th>Ones</th><th>.</th><th>Tenths</th><th>Hundredths</th><th>Thousandths</th><th>Ten Thousandths</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Word Form: a) _____ b) _____ c) _____ Day 5 3. Lesson Activity Write the following words in figures/numerals. a) Seventy-nine thousandths b) Two hundred fifteen thousandths c) Three and twelve thousandths d) four ten thousandths e) sixty-eight ten thousandths f) Two and five thousand seven hundred thirty-five ten thousandths	Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths																									See Learning Activity Sheet 3 Answers: a) 0.079 b) 0.215 c) 3.012 d) 0.0004 e) 0.0068 f) 2.5735
Hundreds	Tens	Ones	.	Tenths	Hundredths	Thousandths	Ten Thousandths																											
D. Making Generalizations	1.Learners’ Takeaways A. Explain how to read numbers with 3 decimal places. B. Explain how to read numbers with 4 decimal places. 2.Reflection on Learning • Give instances when these lessons can be of help to you.	Answers to Learners’ Takeaways A. Read the whole number part, then read the decimal point as “and”, then read the decimal part just like how you read whole numbers, then say “thousandths” (this is the place value of the last digit). B. Read the whole number part, then read the decimal point as “and”, then read the decimal																																

		part just like how you read whole numbers, then say “ten thousandths” (this is the place value of the last digit).
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IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER’S REFLECTION				NOTES TO TEACHERS
A. Evaluating Learning	Formative Assessment A. In 0.0358, a) Which is the thousandths digit? b) Which is the ten thousandths digit? c) What is the value of the thousandths digit? d) What is the value of the ten thousandths digit? e) which has a bigger value, the thousandths digit or ten thousandths digit? B. Write the word form of 7.002. C. Write five and seventeen ten thousandths in figure/numeral.			Answers: A. a) 5 b) 8 c) 0.005 d) 0.0008 e) thousandths digit B. seven and two thousandths C. 5.0017
B. Teacher’s Remarks	<i>Note observations on any of the following areas:</i>	Effective Practices	Problems Encountered	Teachers are encouraged to record relevant observations or any critical teaching events that influence the attainment of the lesson objectives. Use or modify the provided template in recording the notable instructional areas or concerns. In addition, notes here can also be on tasks that will be continued the next day or additional activities needed.
	<i>strategies explored</i>			
	<i>materials used</i>			
	<i>learner engagement/ interaction</i>			
	<i>others</i>			
C. Teacher’s Reflection	<i>Reflection guide or prompt can be on:</i> <u><i>principles behind the teaching</i></u> <i>What principles and beliefs informed my lesson?</i> <i>Why did I teach the lesson the way I did?</i>			Entries on this section are teacher’s reflections about the implementation of the whole lesson, which will serve as input for the LAC sessions. Use or modify the provided guide questions in eliciting teacher’s insights.

	▪ <u>students</u> <i>What roles did my students play in my lesson?</i> <i>What did my students learn? How did they learn?</i> ▪ <u>ways forward</u> <i>What could I have done differently?</i> <i>What can I explore in the next lesson?</i>	
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