

7

Learning Activity Sheet for Mathematics

Quarter 1

Week

7

Learning Activity Sheet Mathematics Grade 7

Quarter 1: Week 7

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LEARNING ACTIVITY SHEETS

Learning Area:	Mathematics	Quarter:	First
Week:	7	Day:	1
Lesson Title/Topic:	RATIONAL NUMBERS		
Name:		Grade & Section	7

Component 1: (Lesson Short Review)

Activity 1: DESCRIBE ME!

Objective(s):

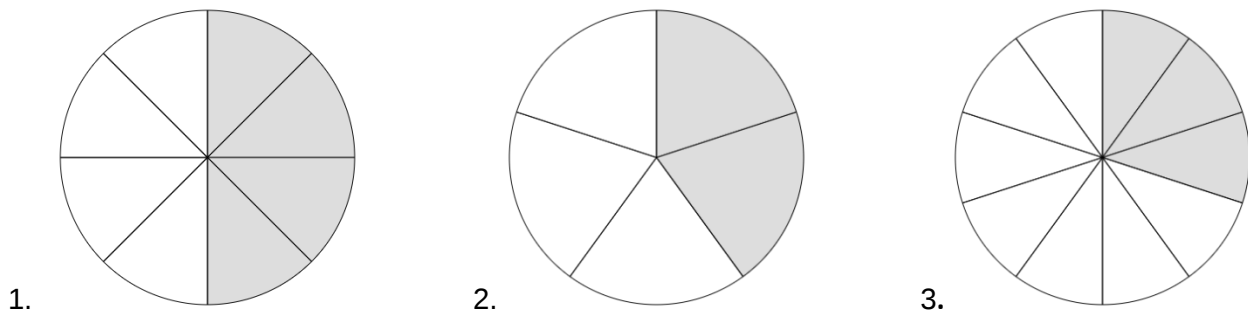
To assess students' understanding of fractions, decimals, and percentages as foundational concepts before proceeding with the lesson.

Materials Needed:

- Illustrations of fractions, decimals, and percentages (examples provided below)
- Worksheet or table for students to describe each illustration as a fraction, decimal, or percentage

Duration: 7 minutes

Directions: Analyze the illustration provided and describe the following as a fraction or as a decimal or as a percentage. Write your answer in the corresponding column in the table below.



ITEM	FRACTION	DECIMAL	PERCENTAGE
1			
2			
3			

Component 3: (Lesson Language Practice)

Activity 2: Identifying Key Terms in Fractions, Decimals, and Percentages

Objective(s):

To facilitate language development by recalling terms pertinent to the discussion of fractions, decimals, and percentages.

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 5-7 minutes

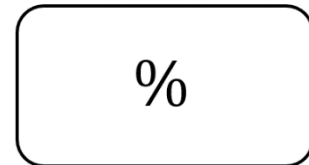
Directions: Analyze and understand the illustration and answer the questions that follow. You may refer to the jumbled word as the clues for each question.

Fraction:

$$3\frac{2}{5}$$

1. What does the 2 indicate in the fraction?
2. What does the 5 indicate in the fraction?
3. What does the 3 indicate in the fraction?

Percentages:



1. What do you call this symbol? _____

Decimal:

56.184

1. What is '56' in the number? _____
2. What is the dot in the number? _____
3. What is '184' in the number? _____

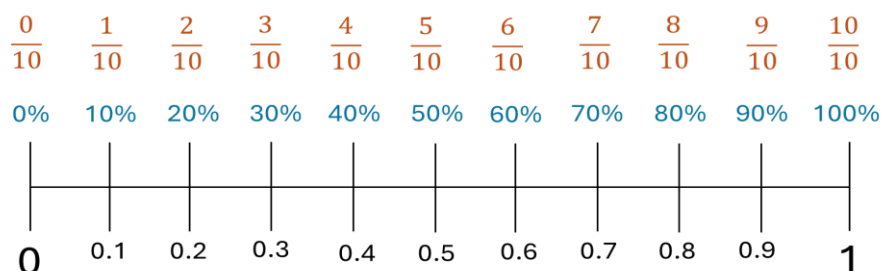
Jumbled Words:

Urmateorn	mianotdenor	lwohe unbmer
ladiem cptoni	cfritonaal prta	rnepct

Component 4A: (Lesson Activity)

Key Idea: Rational numbers are the results we obtain when we divide two numbers (of course except when divided by 0). These results can be represented in different forms, namely: fractions, decimals, or percentages.

An example is shown below

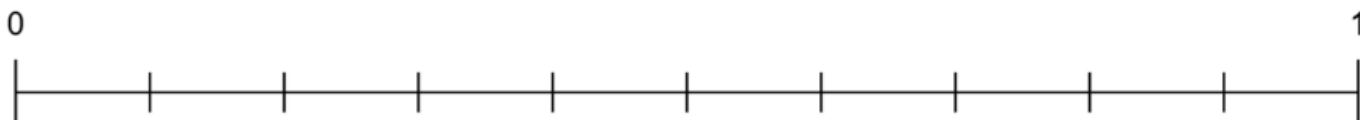


Suppose a number line from 0 to 1 is divided into 10 equal parts. Each part represents $\frac{1}{10}$ or 0.1, which helps us to assign points for various fractions and their equivalent decimals and percentages. For example, the fraction $\frac{1}{2}$, the decimal 0.5, and the percentage 50% all correspond to the same point on the number line.

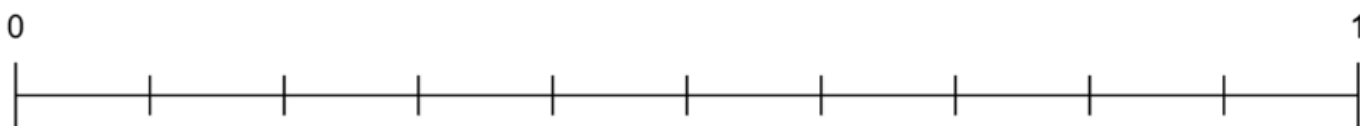
Activity 3: NUMBER LINE ACTIVITY

Directions: Determine at which point in the number line is the given value located. Plot the value on the number line.

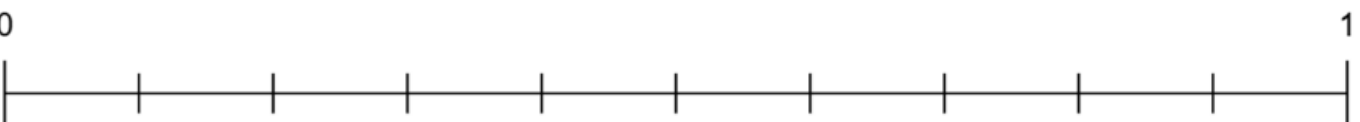
1. $\frac{2}{5}$



2. 0.75



3. 80%



Activity 4: ADVANCE NUMBER LINE ACTIVITY

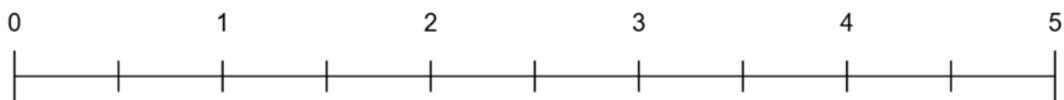
Objective (s):

To help students understand how to extend the number line beyond 1 and accurately plot rational numbers greater than 1, including mixed numbers, decimals, and percentages.

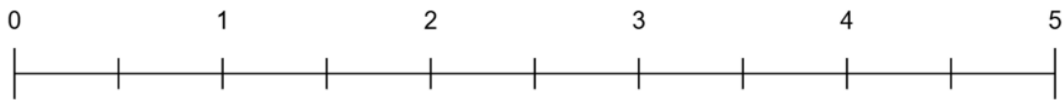
Materials Needed: Large number line (drawn on the board or printed on a poster) extending beyond 1, ideally up to 5, Markers or sticky notes, Rulers (for students to draw their own extended number lines)

Directions: Plot the following numbers on the number line below. Label each point with the fraction, decimal, and percentage.

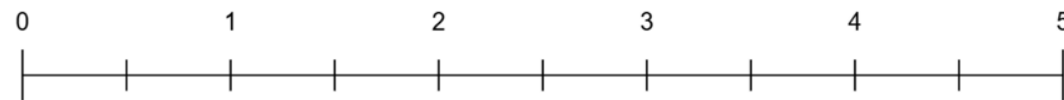
1. $4\frac{3}{10}$



2. 2.20



3. 410%



NOTE: The technique here is to extend the number line beyond 1.

Component 5: Lesson Conclusion

Duration: 5 - 7 minutes

Reflect on what you have learned from the activity by answering the following questions:

1. What new information did you learn today about fractions, decimals, or percentages?
2. Which part of the activity did you find most challenging, and why?
3. How do you think understanding these concepts will help you in future math lessons?
4. Discuss how fractions, decimals, and percentages are used in real life (e.g., in shopping, cooking, and finance). Give examples from your own lives where you might use these concepts.

Activity 5: EXIT TICKET

Objective (s):

To assess students' understanding of converting and locating fractions, decimals, and percentages on a number line.

Instructions:

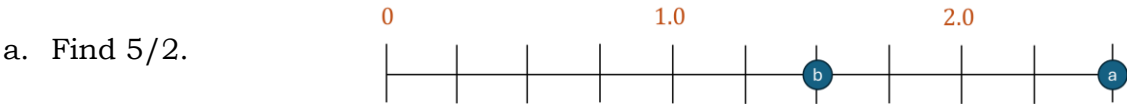
Complete the following tasks to demonstrate your understanding of how to locate fractions, decimals, and percentages on a number line. Use the given number lines to plot your answers.

Tasks:

1. Units in a number line are represented by fractions. Assign a point to the given decimal/percentage.



2. Units in a number line are represented by decimals. Assign a point to the given fraction/percentage.



LEARNING ACTIVITY SHEETS

Learning Area:	Mathematics	Quarter:	First
Week:	7	Day:	2
Lesson Title/Topic:	RATIONAL NUMBERS		
Name:		Grade & Section	7

Component 1: (Lesson Short Review)

Activity 1: MODEL REPRESENTATION

Objective(s):

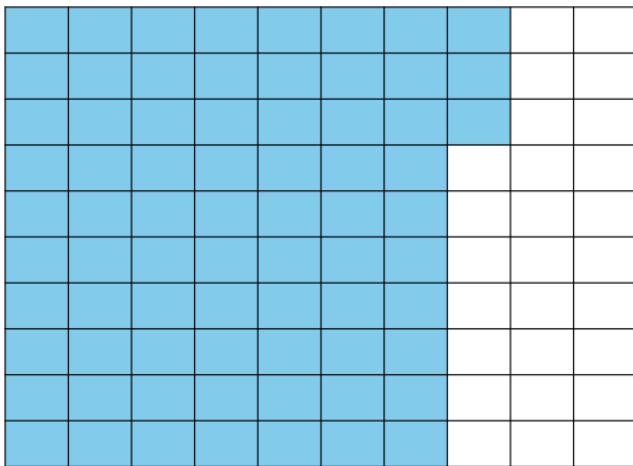
1. describe given rational numbers as fractions, decimals, or percentages.
2. convert rational numbers from percentage form to decimal form and fraction form; and
3. convert rational numbers from fraction form to decimal form and percentage form.

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 7 minutes

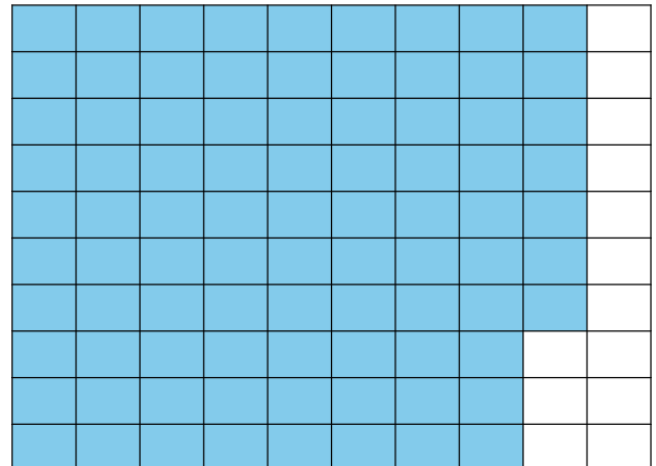
Directions: Represent the following into percentage, fraction, and decimal.

1. Represent 73 out of 100 in three (3) ways



Represent 73 out of 100 as a:	
Percentage	
Fraction	
Decimal	

2. Represent 87 out of 100 in three (3) ways



Represent 87 out of 100 as a:	
Percentage	
Fraction	
Decimal	

Questions

1. How are the notations related to each other?
2. Are these numbers rational?
3. Do you recall conversion techniques between percentages, fractions, and decimals?

Component 2: (Lesson Language Practice)

Activity 2: MATH WORD PUZZLE

Objective(s):

To identify and define math-related terms hidden in a puzzle and demonstrate understanding of these terms through various representations of numbers.

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 3 minutes

Directions: Eleven different math-related words are hidden in the puzzle. You can find the words by looking up, down, across, backward, or diagonally. After finding all the words, write them down.

N	U	M	E	R	A	T	O	R	E	O	S
A	O	B	L	N	W	C	X	E	P	T	H
J	W	I	J	E	D	O	E	B	E	Y	O
C	P	C	T	C	I	N	S	M	R	M	L
G	Z	O	P	C	B	V	G	U	C	L	A
V	K	N	U	X	A	E	F	N	E	K	M
F	X	V	D	Y	L	R	H	M	N	N	I
M	A	E	C	V	N	S	F	J	T	O	C
U	Q	R	R	A	T	I	O	N	A	L	E
R	E	T	B	R	S	O	I	K	G	P	D
Z	C	A	Q	C	D	N	E	E	E	W	Y
R	O	T	A	N	I	M	O	N	E	D	L

Questions

1. Identify all the math-related words in the puzzle.
2. List each word you have discovered from the puzzle.
3. Describe the meaning of each word in your own words.
4. Provide a brief definition for each math-related word found in the puzzle.

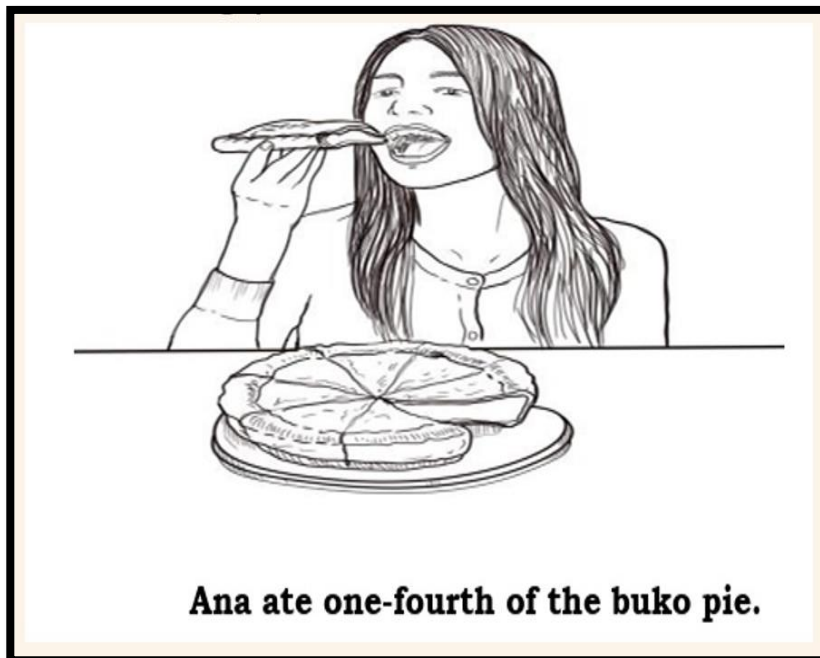
Component 4A: (Lesson Activity)

Activity 3: EXPRESS DIFFERENTLY

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 5 - 7 minutes

Directions: Examine the given exercises, then answer the following questions below.



Ana ate one-fourth of the buko pie.

Questions:

1. How would you describe one-fourth as a fraction, a decimal, or a percentage?
2. Do these numbers have the same value?

Component 4B: (Lesson Activity)

Activity 4: CONVERSION TECHNIQUES

Materials Needed: Worksheet, pen and paper, Visual illustrations, slide presentation.

Duration: 25 minutes

Directions: Study and understand the scenario and illustrations provided and answer the questions that follow.

In Ms. Tiangco's mathematics class, students embarked on an engaging journey into the world of Conversion Techniques. To ensure a thorough understanding, the class approached the topic in structured parts, starting with converting fractions to decimals and percentages, then decimals to fractions and percentages, and finally converting percentages to fractions and decimals.

Part 1: Converting Percentage to Fractions and Decimals

CONVERTING

Fractions, Decimals and Percentage

Decimal
Fraction
Percentage

1. Divide the fraction

$$\begin{array}{r} 1.5 \\ 2 \overline{) 3.0} \\ \underline{-2} \\ 1.0 \\ \underline{1.0} \\ 0 \end{array}$$

CONVERT to

$$\frac{3}{2}$$

1. Divide the fraction

$$\begin{array}{r} 1.5 \\ 2 \overline{) 3.0} \\ \underline{-2} \\ 1.0 \\ \underline{1.0} \\ 0 \end{array}$$

2. Multiply the quotient by 100
 $1.5 \times 100 = 150$
 or move the decimal point two units to the right and put % sign
 $1.50 = 150\%$

Part 2: Converting to Fractions to Decimals and Percentage

CONVERTING

Fractions, Decimals and Percentage

Percentage
Decimal
Fraction

1. Multiply the decimal by 100
 $0.65 \times 100 = 65$
 or move the decimal point two units to the right and put % sign
 $0.65 = 65\%$

CONVERT to

$$0.65$$

1. Use the place value of the last digit to the right of the decimal point as the denominator
 Hundredths = $\frac{x}{100}$

2. Omit the decimal point and make that number a numerator
 $0.65 = \frac{65}{100}$

3. Reduce the fraction to the lowest Term, if possible. $\frac{65}{100} = \frac{13}{20}$

Part 3: Converting Decimals to Fractions and Percentage

CONVERTING

Fractions, Decimals and Percentage

Fraction

Percentage

Decimal

1. Remove the % symbol in 15
2. Write the number "Over" 100

$$\frac{15}{100}$$

3. Reduce the number in simplest form, if possible

CONVERT to

15%

1. Remove the % symbol in 15
2. Divide the number by 100

$$\frac{15}{100} = 0.15$$

or move the decimal point two places to the left

15.0% $\rightarrow$ 0.15

Questions:

1. How do we convert percentages to fractions? How about percentage to decimal?
2. State the process of converting a fraction to its equivalent decimal. How about fractions to percentages?
3. Determine and state the conversion techniques/processes from decimals to percentages and fractions.
4. Which of the conversions do you find easy? Why?
5. Which among the conversions do you find challenging? Can you think of another way to make it easier?

Activity 5: CONVERSION CHALLENGE: PERCENTAGES, DECIMALS, AND FRACTIONS MATCH-UP

Materials: Conversion Challenge worksheet (provided) and Pen or pencil.

Directions: Fill out the missing fractions, decimals, and percentages in the table below. Express in simplest form.

Percentages	Fractions	Decimals
Example: 60%	$\frac{3}{5}$	0.6
1. 26%		
2. 42%		
3. 9%		
4.	$\frac{3}{10}$	
5.	$\frac{7}{4}$	
6.	$\frac{13}{50}$	
7.		1.07
8.		0.072
9.		1.75
10.		0.44

Questions:

1. State the process of converting percentages to decimals and fractions.
2. Determine the techniques for converting among fractions, decimals, and percentages.
3. Why is it important to reduce fractions to their lowest terms?

Activity 6: LET'S MEASURE YOUR LEARNINGS

Directions: Multiple Choice. Choose the letter of the best answer. Write your answer on a separate sheet of paper.

1. Express the fraction $\frac{2}{5}$ in a different form that represents the same value.
 - a. 40%
 - b. 0.04
 - c. 2.5
 - d. $0.\overline{44}$
2. Convert 0.56 as a percentage and fraction in its simplest form.
 - a. 5.6%; $\frac{5}{6}$
 - b. 56%; $\frac{14}{25}$
 - c. 56%; $\frac{56}{100}$
 - d. 5.6%; $\frac{56}{100}$
3. Which of the following shows 3% as decimals?
 - a. 0.03
 - b. 0.003
 - c. 0.0003
 - d. 0.3
4. Fill in the box to make an equivalent rational number: $96\% = \frac{\boxed{}}{25} = 0.96$
 - a. 100
 - b. 96
 - c. 25
 - d. 24
5. Which option from the choices provided is **NOT** equal to 1?
 - a. 1.0
 - b. 100%
 - c. 10%
 - d. $\frac{1}{1}$

Activity 7: MASTERING CONVERSION

Directions: Fill in each box with fractions, decimals, and percentages to correctly complete the statements below. Write your answer on a separate sheet of paper.

	Fraction	Decimal	Percentage
1.	$\frac{13}{50}$		
2.		0.42	
3.			44%
4.		0.875	
5.	$\frac{7}{20}$		

Reflections:

3 -2-1 Reflection

Directions: Answer the 3-2-1 reflections by providing three key points or insights, two questions for further exploration, and one actionable step or takeaway. Write your responses on a separate sheet of paper.

Three (3) things I've learned today.

- 1. _____
- 2. _____
- 3. _____

Two (2) things I found interesting.

- 1. _____
- 2. _____

One (1) question I still have.

- 1. _____

LEARNING ACTIVITY SHEETS

Learning Area:	Mathematics	Quarter:	First
Week:	7	Day:	3
Lesson Title/Topic:	RATIONAL NUMBERS		
Name:		Grade & Section	7

Component 1: (Lesson Short Review)

Activity 1: DESCRIBE THE OUTPUT

Objective:

1. convert rational numbers from decimal form to fraction form and percentage form.

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 7 minutes

0.25	$\frac{1}{2}$	75%
$\frac{3}{5}$	90%	0.20
80%	0.40	$\frac{2}{5}$

Questions:

1. How did you determine the fraction form of each decimal?
2. What steps did you follow to convert the decimal to a percentage?
3. Why are these numbers considered rational?

Component 3: (Lesson Language Practice)

Activity 2: DEFINE IN YOUR OWN WORDS!

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 3 minutes

Directions: Read the words below. Write words that come to your mind and cite examples.

- | | |
|---------------------|------------------|
| 1. Rational numbers | 5. Whole numbers |
| 2. Numerator | 6. Percentage |
| 3. Decimals | 7. Number line |
| 4. Fraction | 8. Denominator |

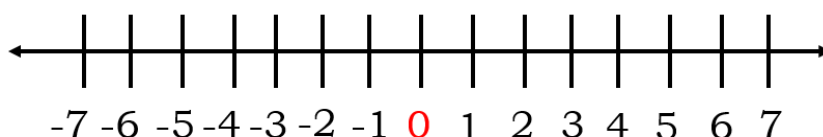
Component 4B: (Lesson Activity)

Activity 3: THINK PAIR SHARE!

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 25 minutes

Directions: Look for a partner and discuss the given activity. Afterward, I will choose 3 pairs to present your work in front.



1. Arrange the following fractions in order, from the least to greatest. $\frac{3}{4}$, $\frac{5}{6}$, $\frac{4}{5}$, $\frac{1}{3}$, $\frac{3}{4}$
2. Convert 0.6 to fraction and percent.
3. Change 22% to decimal and fraction.
4. During a sale, some items are advertised at a 25% discount. A dress usually costs Php1,500. How much is the discounted price?

Activity 4:

Directions: Answer the following problems.

1. In a Grade 7 class with 40 students, $\frac{3}{4}$ are girls. How many girls are there? How many percent is $\frac{3}{4}$?
2. In a survey, 9 out of 10 people said that they love singing than dancing. Write this in decimal form.
3. In a class, 75% of them remembered to bring coloring materials for their art class. What percentage of students forgot to bring their coloring materials?

Activity 5: WHAT HAVE YOU LEARNED!

Directions:

In your own words, how will you describe the process of converting fractions to decimals and percentages and vice versa?

Activity 6: ASSESSMENT

Directions: Answer the following problems by converting them to fractions, decimals, and percentages.

1. Convert $\frac{13}{20}$ to decimal.
2. Change 92.5% in fraction.
3. Convert 2.5% in fractions.
4. Convert $\frac{2}{3}$ in percentage.
5. Change 10% in fraction.

Reflections:

3 -2-1 Reflection

Directions: Answer the 3-2-1 reflections by providing three key points or insights, two questions for further exploration, and one actionable step or takeaway. Write your responses on a separate sheet of paper.

Three (3) things I've learned today.

4. _____
5. _____
6. _____

Two (2) things I found interesting.

3. _____
4. _____

One (1) question I still have.

2. _____

LEARNING ACTIVITY SHEETS

Learning Area:	Mathematics	Quarter:	First
Week:	7	Day:	4
Lesson Title/Topic:	RATIONAL NUMBERS		
Name:		Grade & Section	7

Component 1: (Lesson Short Review)

Activity 1: DESCRIBE THE OUTPUT

Objective(s):

1. arrange rational numbers in order from least to greatest or vice versa; and
2. order rational numbers on the number line.

Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 7 minutes

Directions: Name the number that satisfies the description below. Write your answer in the blank provided below.

1. $10\% < a < 30\%$ _____
2. $\frac{2}{3} < a < \frac{4}{5}$ _____
3. $0.20 < a < 0.40$ _____
4. $3.5 < a < 4.5$ _____
5. $\frac{3}{6} < a < \frac{6}{8}$ _____

Questions:

1. How can you convert a percentage to a decimal or a fraction to find a number within the range?
2. What strategies can you use to ensure your answer is correct and fits within the given range?
3. Why is it important to understand the relationships between percentages, fractions, and decimals when completing this activity?

Component 3: (Lesson Language Practice)

Activity 2: DEFINE IN YOUR OWN WORDS!

Materials Needed: Worksheet, pen and paper, number line, slide presentation.

Duration: 3 minutes

Directions: The diagram below shows an example or illustration of terms related to the day's lesson. In your own words, define each term and write your answer in the space provided.

Number Line 	
Ascending Order 2, 5, 6, 8, 11, 15	
Descending Order 15, 11, 8, 6, 5, 2	

Component 4A: (Lesson Activity)

Activity 3: CONVERT AND ARRANGE!

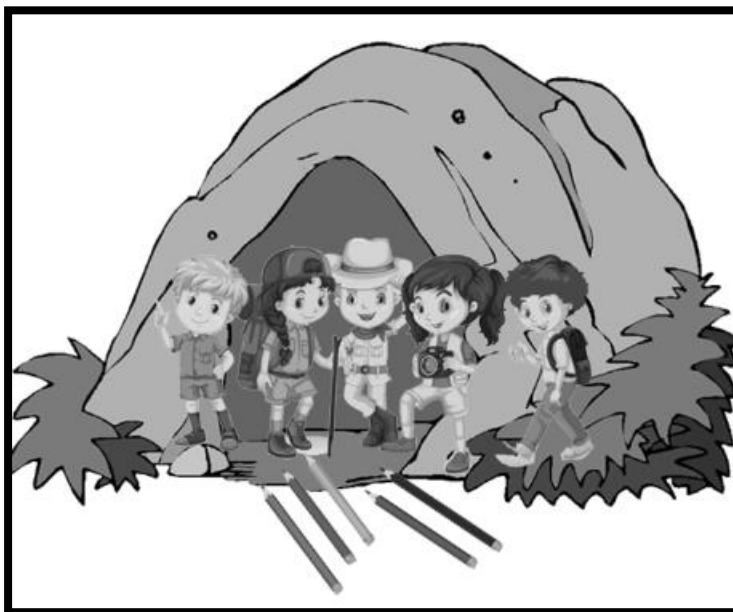
Materials Needed: Worksheet, pen and paper, slide presentation.

Duration: 25 minutes

Directions: Analyze the pencil lengths recorded by the five Grade 7 explorers in the scenario provided. Determine which explorer's pencil is the longest and shortest and arrange all the lengths in ascending and descending order. Record your findings and reasoning for each comparison.

Pencil Expedition: A Grade 7 Measurement Adventure

Five adventurous explorers in Grade 7 embarked on a thrilling journey into the mysterious depths of a forgotten cave. Equipped with their trusty pencils, they sketched the wonders they discovered. Each explorer carefully measured their pencil lengths, eager to document their findings. They recorded the lengths: Jack's measured $13/5$ inches, Emily's $17/4$ inches, Liam's $13/3$ inches, Sophia's 3.77 inches, and Noah's 5.2 inches. Now, as they emerge from the cave, they are excited to compare their pencil lengths and determine who has the longest, shortest, and most intriguing measurement. Can you help them with their discoveries?



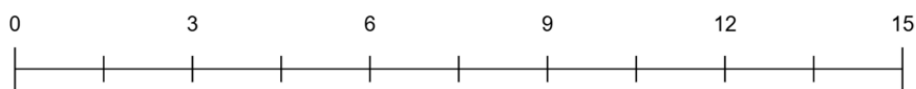
Questions:

1. Which explorer's pencil is the longest in measure, ready to sketch the grandest of adventures?
2. Which explorer's pencil is the shortest, perfect for capturing tiny details?
3. Arrange the pencil lengths in ascending order to unravel the journey from smallest to largest.
4. Arrange the pencil lengths in descending order to relive the expedition from largest to smallest.

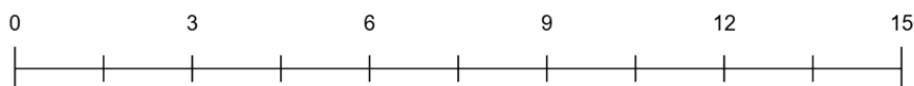
Activity 4: ORDER ON THE NUMBER LINE!

Directions: Arrange rational numbers in ascending order and plot them on the number line.

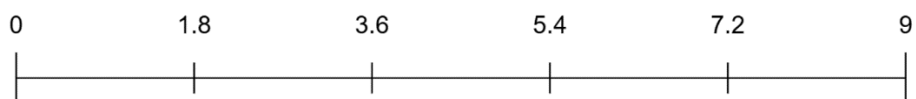
1. $\frac{15}{2}, 3, 13.5, \frac{3}{2}, 15$



2. $\frac{5}{2}, 6, 9, \frac{21}{2}, \frac{27}{2}$



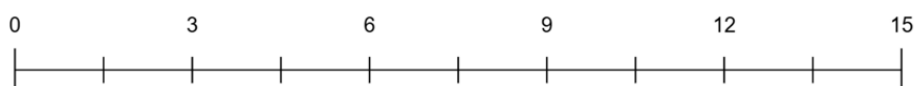
3. $\frac{9}{5}, 3.6, 9, \frac{27}{5}, 7.2$



Activity 5: ANALYZING THE TABLE!

Directions: Arrange rational numbers in descending order and plot them on the number line.

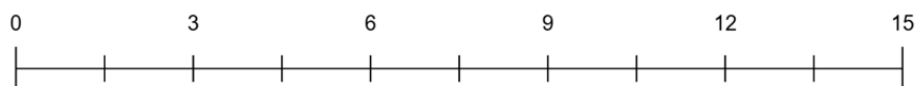
1. $\frac{5}{2}, 6, 9, \frac{21}{2}, \frac{27}{2}$



2. $\frac{9}{5}, 3.6, 9, \frac{27}{5}, 7.2$



3. $\frac{15}{2}, 3, 13.5, \frac{3}{2}, 15$



Activity 6: LET'S TAKE A SHORT QUIZ!

Directions:

- Place a $>$, $<$, or $=$ symbol to compare the following rational numbers below.

a. $\frac{1}{2}$ ___ 0.5

d. 4.7 ___ 7.4

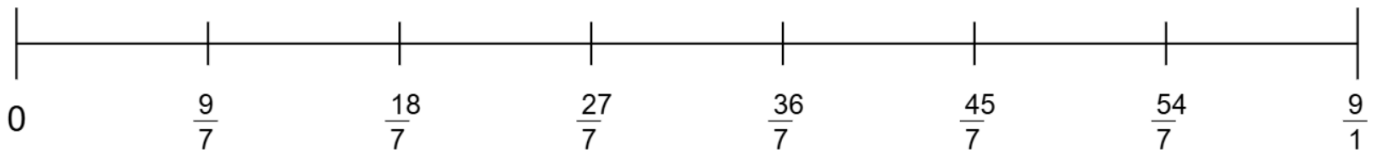
b. $\frac{2}{3}$ ___ $\frac{5}{3}$

e. 70% ___ 80%

c. $\frac{3}{2}$ ___ $\frac{5}{2}$

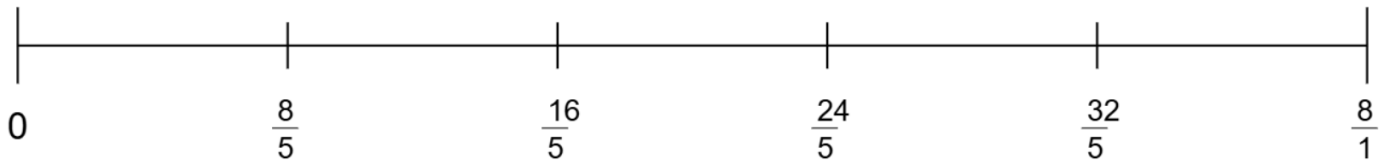
- Arrange the following rational numbers in ascending order and then plot on a number line:

$7.714, \frac{9}{7}, \frac{27}{7}, 5.142, 9.$



- Arrange the following numbers in descending order and plot on a number line:

$3.2, \frac{8}{5}, \frac{24}{5}, 6.4, 8$

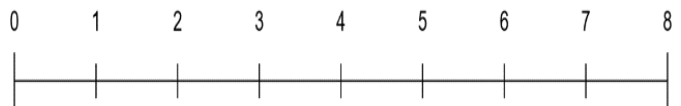


Activity 7: SOMETHING MORE

Directions:

- Identify two rational numbers x that satisfy the given description and then plot the numbers on a number line.

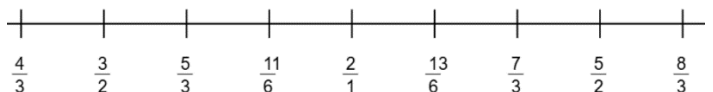
a. $0 < x < 8$; $x = \underline{\hspace{1cm}}, x = \underline{\hspace{1cm}}$



b. $\frac{7}{2} < x < \frac{17}{2}$; $x = \underline{\hspace{1cm}}, x = \underline{\hspace{1cm}}$



c. $\frac{4}{3} < x < \frac{8}{3}$; $x = \underline{\hspace{1cm}}, x = \underline{\hspace{1cm}}$



Reflections:

3 -2-1 Reflection

Directions: Answer the 3-2-1 reflections by providing three key points or insights, two questions for further exploration, and one actionable step or takeaway. Write your responses on a separate sheet of paper.

Three (3) things I've learned today.

7. _____
8. _____
9. _____

Two (2) things I found interesting.

5. _____
6. _____

One (1) question I still have.

3. _____