

Lesson Exemplar for Mathematics

Quarter 3
Lesson

4

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

This material is intended exclusively for the use of teachers in the implementation of the MATATAG K to 10 Curriculum during the School Year 2024-2025. It aims to assist in delivering the curriculum content, standards, and lesson competencies. Any unauthorized reproduction, distribution, modification, or utilization of this material beyond the designated scope is strictly prohibited and may result in appropriate legal actions and disciplinary measures.

Borrowed content included in this material are owned by their respective copyright holders. Every effort has been made to locate and obtain permission to use these materials from their respective copyright owners. The publisher and development team do not represent nor claim ownership over them.

Development Team

Writer:

- Kimberly Gomez-Mallari, Ph.D. (City College of San Fernando Pamapanga)

Validator:

- Lalaine Ann F. Manuel, Ph.D. (Central Luzon State University)

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 3 / GRADE 4

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES

A. Content Standards	The learner should have knowledge and understanding of dissimilar and equivalent fractions
B. Performance Standards	By the end of the quarter, the learners are able to represent, compare, and order dissimilar fractions.
C. Learning Competencies and Objectives	Order dissimilar fractions from smallest to largest, and vice versa.
D. Content	<ol style="list-style-type: none">1. Ordering dissimilar fractions from smallest to largest, and vice versa.<ol style="list-style-type: none">a. Order dissimilar fractions using models; andb. Order dissimilar fractions.
E. Integration	Equality, Fairness, and Collaboration

II. LEARNING RESOURCES

BYJU's. (n.d.). *Representing Mixed Numbers on the Number Line*. Retrieved December 30, 2023, from <https://byjus.com/question-answer/represent-the-following-fractions-on-the-number-line-a-frac-2-5-b-frac-7/%0A>

Camarista, Genesis G Oranio, I. B. (2020). *Teaching Mathematics in the Intermediate Grades*. Lorimar Publishing Inc.

Cuemath. (n.d.). *Fraction on the Number Line*. Retrieved December 30, 2023, from <https://www.cuemath.com/numbers/fractions-on-number-line/>

Hand2Mind. (n.d.). *How to Use Cuisenaire Rods to Teach Key Math Concepts!* Retrieved December 30, 2023, from <https://www.hand2mind.com/blog/how-to-use-cuisenaire-rods>

Hoo L.C, Sachidanandan R. (2016). *Discover Math 3* (1st ed.). Marshall Cavendish Education.

PDST. (n.d.). *Fraction Dice Games*. Retrieved December 30, 2023, from <https://www.scoilnet.ie/uploads/resources/34565/34316.pdf>

Song J, Chen T.H, Shing L. H. (2016). *Discover Math 4* (1st ed.). Marshall Cavendish Education.

Toy Theater. (n.d.). *Teacher Tools*. Retrieved December 30, 2023, from <https://toytheater.com/category/teacher-tools/>

III. TEACHING AND LEARNING PROCEDURE	NOTES TO TEACHERS
<p>A. Activating Prior Knowledge</p>	<p>Option 1: (Individual) The teacher may ask five volunteers to arrange the fractions per set, from smallest to largest. Then, the pupils will be asked to post the fraction/number cards on the board.</p> <p>Option 2: (Group) The teacher will group the class into five groups. Each group will be given a set of fraction/number cards, which they will arrange. A representative from each group will show their answers to the class.</p>
<p>B. Establishing Lesson Purpose</p>	<p>The presentation of objectives will be based on the coverage of the lesson for a specific day which must be done creatively.</p> <p>Below are some ideas.</p> <ul style="list-style-type: none"> Writing the objectives on colored papers to be posted

DAY 1

1. Short Review

The teacher will ask the pupils to arrange the following set of fraction/number cards from smallest to largest.

Set A:

Set B:

Set C:

Set D:

4,112

4,201

4,029

Set E:

19,010

19,101

19,100

19,001

The teacher will ask the following questions:

1. How do we arrange/order whole numbers?
 - Compare the digits starting from the leftmost place value.
 - The number with the larger digit in this place value is the largest.
2. What kind of fractions are fractions in Sets A – C?
 - Similar fractions
3. How do we arrange similar fractions?
 - Since they have the same denominators, compare the numerators and arrange them according to their values.

2. Feedback (Optional)

1. Lesson Purpose

Our previous lesson explored comparing dissimilar fractions using symbols $<$, $>$, and $=$ through different strategies. Today, let us explore how we order or arrange fractions from smallest to largest or vice versa. Specifically, we have the following objectives:

- a. Order dissimilar fractions from smallest to largest, and vice versa using models; and
- b. Order dissimilar fractions from smallest to largest, and vice versa using different strategies.

	<p>2. Unlocking Content Area Vocabulary</p> <p>Fractions can be arranged from smallest to largest or from largest to smallest.</p> <ul style="list-style-type: none"> Fractions in Ascending Order – Fractions in ascending order are arranged from smallest to largest. Fractions in Descending Order – Fractions in descending order are arranged from largest to smallest. 	<p>on the board and read by the pupils</p> <ul style="list-style-type: none"> PowerPoint presentation containing the objectives 												
<p>C. Developing and Deepening Understanding</p>	<p>SUB-TOPIC 1: Ordering dissimilar fractions from smallest to largest, and vice versa using models</p> <p>1. Explicitation</p> <p>Fraction Modelling</p> <p>The teacher will group the pupils into four groups and provide each group with a set of fractions written on cards. Each group will be tasked to visually represent each fraction using a specified model. They will also be asked to arrange/order fractions in ascending or descending order. The table below may be utilized.</p> <p>Group 1:</p> <p>Model – fraction strips/bars Order – ascending (smallest to largest)</p> <table border="1"> <thead> <tr> <th>Fraction Card</th><th>Illustration (Fraction Strips/Bars)</th><th>Order of Fractions (Ascending)</th></tr> </thead> <tbody> <tr> <td>$\frac{1}{2}$</td><td></td><td rowspan="4"> $\frac{1}{10}, \frac{1}{5}, \frac{1}{4}, \frac{1}{2}$ </td></tr> <tr> <td>$\frac{1}{5}$</td><td></td></tr> <tr> <td>$\frac{1}{10}$</td><td></td></tr> <tr> <td>$\frac{1}{4}$</td><td></td></tr> </tbody> </table> <p>The teacher will ask the following questions:</p> <ul style="list-style-type: none"> What kind of fractions are given? <i>Dissimilar fractions</i> What have you noticed with their numerators? <i>They have the same numerators.</i> Based on our previous lesson about comparing fractions, how do we compare fractions with the same numerators? <i>When comparing fractions with the same numerators, the fraction with smaller denominator holds the greater value.</i> How do we order fractions with the same numerators? <i>When we order fractions with the same numerators, the fraction with the smallest</i> 	Fraction Card	Illustration (Fraction Strips/Bars)	Order of Fractions (Ascending)	$\frac{1}{2}$		$\frac{1}{10}, \frac{1}{5}, \frac{1}{4}, \frac{1}{2}$	$\frac{1}{5}$		$\frac{1}{10}$		$\frac{1}{4}$		<p>Materials needed:</p> <ul style="list-style-type: none"> Manila paper/cartolina Pentel pen Ruler Coloring materials <p>Each group will be given 10 minutes to accomplish the activity. The suggested table can be drawn on a manila paper/cartolina.</p> <p>A representative from each group will be assigned to present the group output in the class.</p> <p>After each presentation, the teacher may ask questions to process the activity.</p>
Fraction Card	Illustration (Fraction Strips/Bars)	Order of Fractions (Ascending)												
$\frac{1}{2}$		$\frac{1}{10}, \frac{1}{5}, \frac{1}{4}, \frac{1}{2}$												
$\frac{1}{5}$														
$\frac{1}{10}$														
$\frac{1}{4}$														


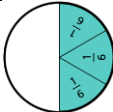
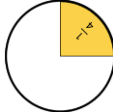
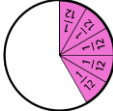
denominator has the greatest/largest value, while the fraction with the largest denominator has the smallest value.

- Which fraction has the greatest/largest value? $\frac{1}{2}$
- Which fraction has the smallest value? $\frac{1}{10}$

Group 2:

Model – fraction circles/disks

Order – descending

Fraction Card	Illustration (Fraction Circles/Disks)	Order of Fractions (Descending)
$\frac{2}{3}$		$\frac{2}{3}, \frac{3}{6}, \frac{5}{12}, \frac{1}{4}$
$\frac{3}{6}$		
$\frac{1}{4}$		
$\frac{5}{12}$		

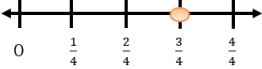

The teacher will ask the following questions:

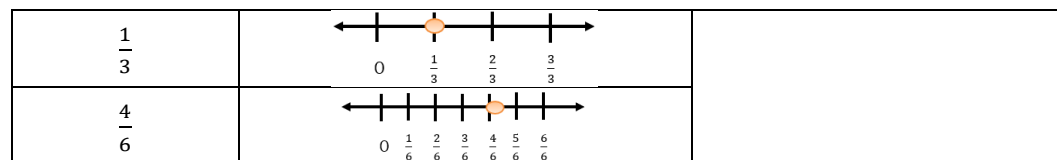
- What kind of fractions are given? *Dissimilar fractions*
- Which fraction has the greatest/largest value? $\frac{2}{3}$
- Which fraction has the smallest value? $\frac{1}{4}$

Group 3:

Model – number line

Order – descending

Fraction Card	Illustration (Number Line)	Order of Fractions (Descending)
$\frac{3}{4}$		$\frac{3}{4}, \frac{4}{6}, \frac{1}{3}, \frac{2}{8}$
$\frac{2}{8}$		



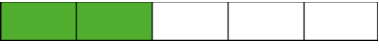
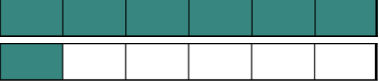
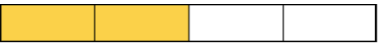
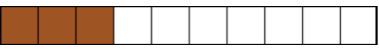
The teacher will ask the following questions:

- What kind of fractions are given? *Dissimilar fractions*
- Which fraction has the greatest/largest value? $\frac{3}{4}$
- Which fraction has the smallest value? $\frac{2}{8}$

Group 4:

Model – fraction strips/bars

Order – ascending

Fraction Card	Illustration (Fraction Strips/Bars)	Order of Fractions (Ascending)
$\frac{2}{5}$		$\frac{3}{10}, \frac{2}{5}, \frac{2}{4}, \frac{7}{6}$
$\frac{7}{6}$		
$\frac{2}{4}$		
$\frac{3}{10}$		

The teacher will ask the following questions:

- What kind of fractions are given? *Dissimilar fractions*
- Which fraction has the greatest/largest value? $\frac{7}{6}$
- Which fraction has the smallest value? $\frac{3}{10}$

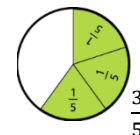
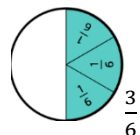
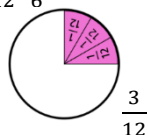
2. Worked Example

Create visual representations or models for the given sets of dissimilar fractions. Then, arrange/order these models in ascending or descending order. Label the fraction models.

Model: Fraction Circles/Disks

Order: Ascending

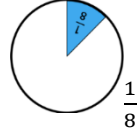
a. $\frac{3}{5}, \frac{3}{12}, \frac{3}{6}$



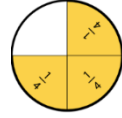
Reiterate that if fractions have the same numerators, the fraction with smaller denominator holds the greater value.

The teacher should reiterate the importance of correctly identifying the kinds of fractions

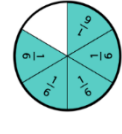
b. $\frac{1}{8}, \frac{3}{4}, \frac{5}{6}, 1\frac{2}{12}$



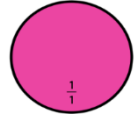
$\frac{1}{8}$



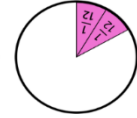
$\frac{3}{4}$



$\frac{5}{6}$



$\frac{1}{1}$

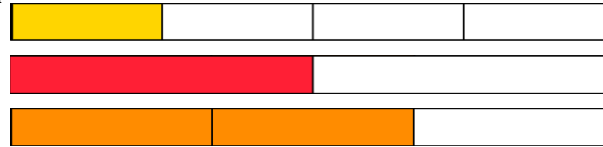


$\frac{2}{12}$

$1\frac{2}{12}$

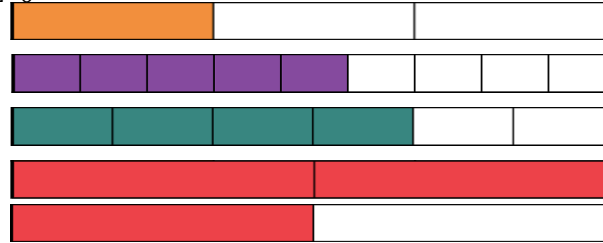
Model: Fraction Strips/Bars

a. $\frac{2}{3}, \frac{1}{2}, \frac{1}{4}$



$\frac{1}{4}$
 $\frac{1}{2}$
 $\frac{2}{3}$

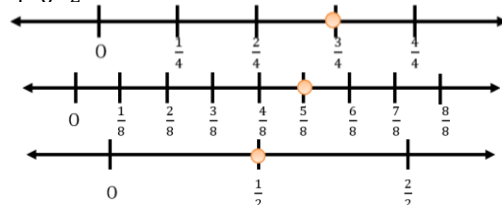
b. $\frac{5}{9}, \frac{1}{3}, \frac{3}{2}, \frac{4}{6}$



$\frac{1}{3}$
 $\frac{5}{9}$
 $\frac{4}{6}$
 $\frac{3}{2}$

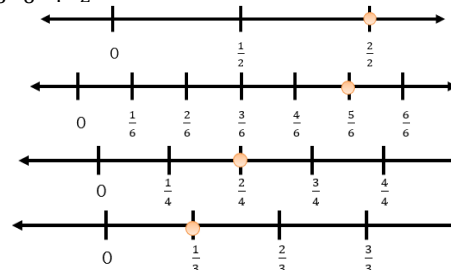
Model: Number Lines

a. $\frac{3}{4}, \frac{5}{8}, \frac{1}{2}$



Order: Descending

b. $\frac{1}{3}, \frac{5}{6}, \frac{2}{4}, \frac{2}{2}$

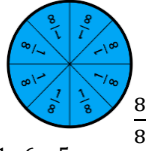


given. This could make it easier for the pupils to put them in the correct order. For example, proper fractions must be written first in an ascending order since their values are lower than those of improper fractions and mixed numbers.

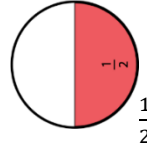
As shown, mixed numbers have values larger than one whole, proper fractions have values less than one whole, and improper fractions have values equal to or greater than one whole; hence, pupils will be able to efficiently arrange dissimilar fractions if they are familiar with this.

Model: Fraction Circles/Disks

a. $\frac{8}{8}, \frac{1}{4}, \frac{1}{2}$



$\frac{8}{8}$

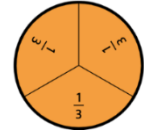
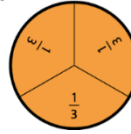


$\frac{1}{2}$

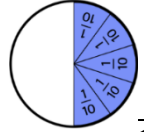


$\frac{1}{4}$

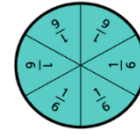
b. $\frac{7}{6}, \frac{1}{5}, \frac{6}{3}, \frac{5}{10}$



$\frac{6}{3}$



$\frac{5}{10}$



$\frac{7}{6}$



$\frac{1}{5}$

Order: Descending

DAY 2

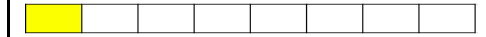
3. Lesson Activity

Draw the given fractions using the indicated model then arrange them in ascending or descending order.

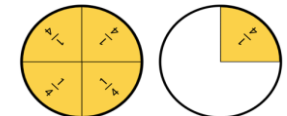
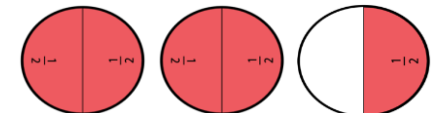
No.	Fraction	Model/Illustration	Order/Arrangement
1	$1\frac{4}{6}$	Fraction Bar:	Ascending:
	$\frac{9}{8}$	Fraction Bar:	
	$\frac{7}{12}$	Fraction Bar:	
2	$\frac{5}{10}$	Fraction Circle:	Descending:
	$\frac{5}{5}$	Fraction Circle:	
	$\frac{5}{4}$	Fraction Circle:	
	$\frac{5}{2}$	Fraction Circle	

Answers to Lesson Activity:

1. $\frac{7}{12}, \frac{9}{8}, 1\frac{4}{6}$



2. $\frac{5}{2}, \frac{5}{4}, \frac{5}{5}, \frac{5}{10}$



3	$\frac{7}{8}$	Number Line:	Descending:
	$\frac{2}{3}$	Number Line:	
	$\frac{4}{4}$	Number Line:	
4	$\frac{4}{6}$	Fraction Circle:	Ascending
	$\frac{4}{10}$	Fraction Circle:	
	$\frac{4}{8}$	Fraction Circle:	
	$\frac{4}{12}$	Fraction Circle:	
5	$\frac{7}{9}$	Fraction Bar:	Ascending:
	$2\frac{1}{3}$	Fraction Bar:	
	$\frac{5}{6}$	Fraction Bar:	

DAY 3

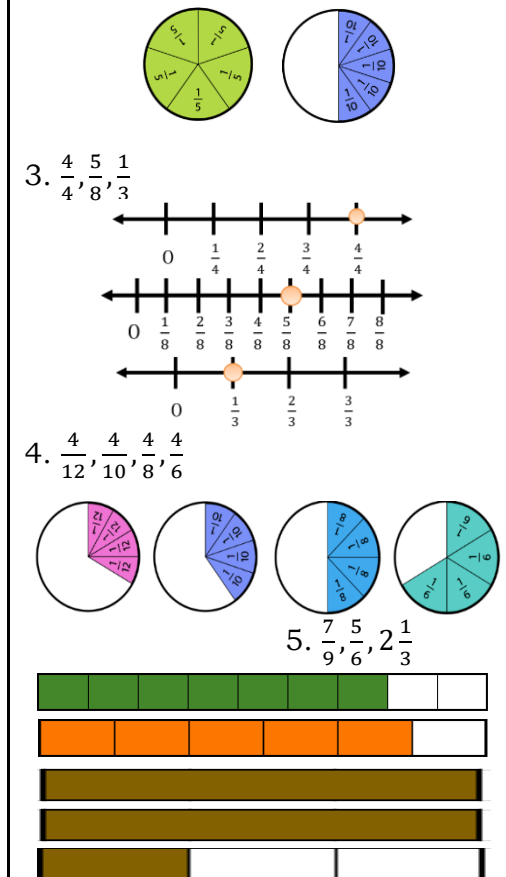
SUB-TOPIC 2: Ordering dissimilar fractions from smallest to largest, and vice versa

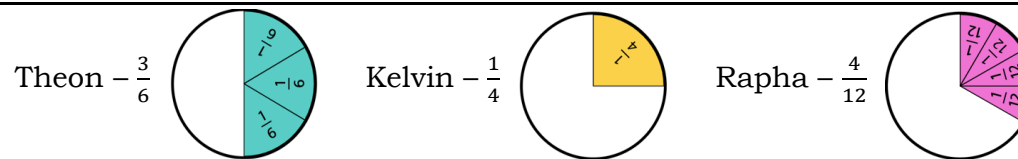
1. Explicitation

The teacher will ask the pupils to model the fractions in the word problem and provide answers by using Fraction Disks.

Fraction Modelling

At a pizza parlor, Theon, Kelvin, and Rapha purchased the same pizzas and divided each pizza among themselves and their relatives. They decided to bring any leftovers to work so they could share them with their colleagues. Theon brought $\frac{4}{12}$ of the pizza, whereas Kelvin was able to bring $\frac{5}{8}$. Rapha arrived with $2\frac{1}{3}$. Who carried the smallest portion of pizza? Who carried the largest portion of pizza? Sort the quantity of pizza that Theon, Kelvin, and Rapha brought to work from the largest to the smallest amount of pizza they shared with their colleagues.





To process the activity, the teacher will ask the following questions:

- What fraction represents the **left-over** of Theon and his relatives? $\frac{3}{6}$
- Therefore, what fraction represents the portion **eaten** by Theon and his relatives? $\frac{6}{6} - \frac{3}{6} = \frac{3}{6}$
- What fraction represents the **left-over** of Kelvin and his relatives? $\frac{1}{4}$
- Therefore, what fraction represents the portion **eaten** by Kelvin and his relatives? $\frac{4}{4} - \frac{1}{4} = \frac{3}{4}$
- What fraction represents the **left-over** of Rapha and his relatives? $\frac{4}{12}$
- Therefore, what fraction represents the portion **eaten** by Rapha and his relatives? $\frac{12}{12} - \frac{4}{12} = \frac{8}{12}$
- Who carried the **smallest portion**? Kelvin
- Who carried the **largest portion**? Theon
- If we sort the quantity of pizza that Theon, Kelvin, and Rapha brought to work from **the largest to the smallest** amount of pizza they shared with their colleagues, how will the arrangement be? Theon $-\frac{3}{6}$, Rapha $-\frac{4}{12}$, Kelvin $-\frac{1}{4}$.

2. Worked Example

Aside from using visual representation to order dissimilar fractions, different strategies can be used. The strategies discussed during the lesson on comparing dissimilar fractions can be applied to ordering fractions. Using the same example, let us demonstrate one-by-one how each of these strategies can be applied to ordering dissimilar fractions.

Strategy 1:

Finding Equivalent Fractions of the Given with the same Denominators

Example 1: Arrange the fractions in **descending** order.

$$\frac{3}{6}, \frac{1}{4}, \frac{4}{12}$$

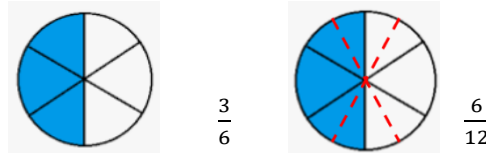
If fractions disks are not available, the pupils may be asked to draw and color the fractions on a sheet of paper.

Models will be presented in the class.

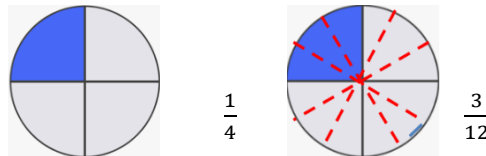
Subtracting similar fractions has already been taken up prior to this lesson. (Quarter 2)

To generate equivalent fractions of each given, we multiply both the numerator and the denominator by the same number.

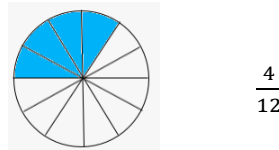
$$\frac{3}{6} \times \frac{2}{2} = \frac{6}{12}, \text{ therefore, } \frac{3}{6} = \frac{6}{12}$$



$$\frac{1}{4} \times \frac{2}{2} = \frac{2}{8}; \frac{1}{4} \times \frac{3}{3} = \frac{3}{12} \text{ therefore } \frac{1}{4} = \frac{3}{12}$$



$$\frac{4}{12} \text{ has the same denominator with that of } \frac{6}{12} \text{ and } \frac{3}{12}$$



To arrange them in **descending order using Strategy 1:**

$$\frac{6}{12}, \frac{4}{12}, \frac{3}{12} \rightarrow \frac{3}{6}, \frac{4}{12}, \frac{1}{4}$$

Strategy 2:

Classifying Fractions into Less than $\frac{1}{2}$, Equal to $\frac{1}{2}$, and Greater than $\frac{1}{2}$

When do we say that a fraction is equal to $\frac{1}{2}$, less than $\frac{1}{2}$, or greater than $\frac{1}{2}$?

- A fraction is equal to $\frac{1}{2}$ if the numerator is half the denominator.
- A fraction is less than $\frac{1}{2}$ if the numerator is less than half of the denominator.
- A fraction is greater than $\frac{1}{2}$ if the numerator is more than half of the denominator.

As a review, the teacher may ask the pupils how equivalent fractions are generated.

The teacher may use fraction models or illustrations with broken lines so that the pupils can easily visualize equivalent fractions.

Reiterate that 12 is the least common multiple of the denominators 4, 6, and 12. Should the pupils go on with the multiples of the given denominators, they can still generate more equivalent fractions with the same denominators.

However, reiterate that using the least common multiple of the denominators (Least Common Denominator or LCD) to generate equivalent fractions simplifies the calculation.

For Fraction equal to $\frac{1}{2}$:

- Which fraction is equal to $\frac{1}{2}$? $\frac{3}{6}$ is equal to $\frac{1}{2}$
- What have you noticed with the numerator and the denominator of $\frac{3}{6}$? The numerator is half the denominator.

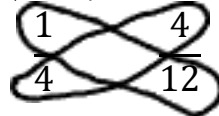
For Fraction less than $\frac{1}{2}$:

- Which fraction is less than $\frac{1}{2}$? $\frac{1}{4}$ and $\frac{4}{12}$ are less than $\frac{1}{2}$
- What have you noticed with the numerator and denominator of $\frac{1}{4}$ and $\frac{4}{12}$?

The numerators are less than half of the denominators.

Since both $\frac{1}{4}$ and $\frac{4}{12}$ are less than $\frac{1}{2}$, we can either use cross multiplication strategy or Strategy 1 to determine which of the two fractions have the greater or smaller value.

$$1 \times 12 = 12 < 4 \times 4 = 16$$



Therefore, $\frac{1}{4}$ is less than $\frac{4}{12}$.

or

$$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} \text{ as compared with } \frac{4}{12}, \text{ therefore, } \frac{3}{12} < \frac{4}{12}$$

The arrangement will be: $\frac{3}{6}, \frac{4}{12}, \frac{1}{4}$

Strategy 3:*Using Cross Multiplication*

In our lesson on comparing fractions, we could determine and check whether a fraction is greater than or less than another fraction using cross multiplication. We can also use this strategy when ordering dissimilar fractions. Let us try using the same given.

Step 1: Compare $\frac{3}{6}$ and $\frac{1}{4}$

$$3 \times 4 = 12 > 6 \times 1 = 6$$



As a review, the teacher may ask the pupils how to identify if a fraction is equal to $\frac{1}{2}$, less than $\frac{1}{2}$, or greater than $\frac{1}{2}$.

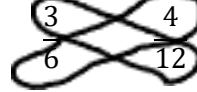
The teacher may organize the answers using the table below:

Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{1}{4} < \frac{4}{12}$	$\frac{3}{6}$	None

As a review, the teacher may ask the pupils how to apply cross multiplication when comparing fractions.

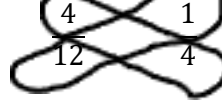
Step 2: Compare $\frac{3}{6}$ and $\frac{4}{12}$

$$12 \times 3 = 36 \quad > \quad 6 \times 4 = 24$$



Step 3: Compare $\frac{4}{12}$ and $\frac{1}{4}$

$$4 \times 4 = 16 \quad > \quad 12 \times 1 = 12$$



Therefore, $\frac{3}{6} > \frac{4}{12} > \frac{1}{4}$ and the arrangement in **descending order** would be: $\frac{3}{6}, \frac{4}{12}, \frac{1}{4}$.

Let us have another set of dissimilar fractions. Order the following fractions in **ascending** order using the three strategies.

$$\text{Example 2: } \frac{4}{9}, \frac{2}{6}, \frac{2}{3}, \frac{1}{2}$$

Strategy 1:

Finding Equivalent Fractions of the Given with the same Denominators

Let us generate equivalent fractions of the given whose denominators are the same.

- $\frac{4}{9} \times \frac{2}{2} = \frac{8}{18}$, therefore, $\frac{4}{9} = \frac{8}{18}$
- $\frac{2}{6} \times \frac{2}{2} = \frac{4}{12}$; $\frac{2}{6} \times \frac{3}{3} = \frac{6}{18}$, therefore, $\frac{2}{6} = \frac{6}{18}$
- $\frac{2}{3} \times \frac{2}{2} = \frac{4}{6}$; $\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$; $\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$; $\frac{2}{3} \times \frac{5}{5} = \frac{10}{15}$; $\frac{2}{3} \times \frac{6}{6} = \frac{12}{18}$, therefore, $\frac{2}{3} = \frac{12}{18}$
- $\frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$; $\frac{1}{2} \times \frac{3}{3} = \frac{3}{6}$; $\frac{1}{2} \times \frac{4}{4} = \frac{4}{8}$; $\frac{1}{2} \times \frac{5}{5} = \frac{5}{10}$; $\frac{1}{2} \times \frac{6}{6} = \frac{6}{12}$;
- $\frac{1}{2} \times \frac{7}{7} = \frac{7}{14}$; $\frac{1}{2} \times \frac{8}{8} = \frac{8}{16}$; $\frac{1}{2} \times \frac{9}{9} = \frac{9}{18}$, therefore, $\frac{1}{2} = \frac{9}{18}$

To arrange them in **ascending order** using **Strategy 1**:

$$\frac{6}{18}, \frac{8}{18}, \frac{9}{18}, \frac{12}{18} \rightarrow \frac{2}{6}, \frac{4}{9}, \frac{1}{2}, \frac{2}{3}$$

Strategy 2:

Classifying Fractions into Less than $\frac{1}{2}$, Equal to $\frac{1}{2}$, and Greater than $\frac{1}{2}$

For Fraction equal to $\frac{1}{2}$:

- Which fraction is equal to $\frac{1}{2}$? $\frac{1}{2}$ is equal to itself

For Fraction less than $\frac{1}{2}$:

- Which fraction is less than $\frac{1}{2}$? $\frac{4}{9}$ and $\frac{2}{6}$ are less than $\frac{1}{2}$
- What have you noticed with the numerator and the denominator of $\frac{4}{9}$ and $\frac{2}{6}$?

The numerators are less than half of the denominators.

Since both $\frac{4}{9}$ and $\frac{2}{6}$ are less than $\frac{1}{2}$, we can either use cross multiplication strategy or Strategy 1 to determine which of the two fractions have the greater or smaller value.

$$4 \times 6 = 24 > 9 \times 2 = 18$$

Therefore, $\frac{4}{9}$ is greater than $\frac{2}{6}$.

or

$$\frac{4}{9} = \frac{8}{18} \text{ and } \frac{2}{6} = \frac{4}{12} = \frac{6}{18}, \text{ therefore, } \frac{4}{9} > \frac{2}{6}$$

For Fraction greater than $\frac{1}{2}$:

- Which fraction is greater than $\frac{1}{2}$? $\frac{2}{3}$ is greater than $\frac{1}{2}$
- What have you noticed with the numerator and the denominator of $\frac{2}{3}$? The numerator is greater than half of the denominator.

The arrangement will be: $\frac{2}{6}, \frac{4}{9}, \frac{1}{2}, \frac{2}{3}$

DAY 4**Strategy 3:**

Using Cross Multiplication

Step 1: Compare $\frac{4}{9}$ and $\frac{2}{6}$

$$4 \times 6 = 24 > 9 \times 2 = 18$$

The teacher may reiterate the following:

- A fraction is equal to $\frac{1}{2}$ if the numerator is half the denominator.
- A fraction is less than $\frac{1}{2}$ if the numerator is less than half of the denominator.
- A fraction is greater than $\frac{1}{2}$ if the numerator is more than half of the denominator.

The teacher may organize the answers using the table below:

Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{4}{9} > \frac{2}{6}$	$\frac{1}{2}$	$\frac{2}{3}$

Step 2: Compare $\frac{4}{9}$ and $\frac{2}{3}$

$$4 \times 3 = 12 < 9 \times 2 = 18$$

Step 3: Compare $\frac{4}{9}$ and $\frac{1}{2}$

$$4 \times 2 = 8 < 9 \times 1 = 9$$

Step 4: Compare $\frac{2}{3}$ and $\frac{1}{2}$

$$2 \times 2 = 4 > 3 \times 1 = 3$$

Therefore, $\frac{2}{6} < \frac{4}{9} < \frac{1}{2} < \frac{2}{3}$ and the arrangement in **ascending order** would be:

$$\frac{2}{6}, \frac{4}{9}, \frac{1}{2}, \frac{2}{3}$$

The teacher will give an example of fractions with the same numerators and ask the pupils to arrange them in **descending order**.

The teacher will ask the following:

- What have you noticed with the numerators of the dissimilar fractions? They have the same numerators.
- Based on our previous lesson, what do we say about the value of the fractions with the same numerators? For fractions with the same numerators, the smaller the denominator, the greater its value.
- Therefore, how will the arrangement be in descending order? $\frac{3}{2}, \frac{3}{4}, \frac{3}{5}, \frac{3}{10}$

3. Lesson Activity

A. Arrange the following sets of dissimilar fractions in **ascending order** by applying any of the strategies discussed.

1. $\frac{7}{10}, \frac{7}{12}, \frac{7}{15}$

3. $\frac{11}{15}, \frac{1}{6}, \frac{5}{10}, \frac{4}{3}$

5. $1\frac{2}{7}, \frac{3}{2}, \frac{6}{14}$

2. $\frac{9}{8}, \frac{4}{10}, \frac{2}{4}, 1\frac{1}{2}$

4. $\frac{2}{9}, \frac{1}{3}, \frac{7}{6}, \frac{1}{2}$

Summary of steps 1 and 2:

- If $\frac{4}{9} > \frac{2}{6}$ and $\frac{4}{9} < \frac{2}{3}$
- Then $\frac{2}{6} < \frac{4}{9} < \frac{2}{3}$

Summary of steps 3 and 4:

- If $\frac{4}{9} < \frac{1}{2}$ and $\frac{2}{3} > \frac{1}{2}$
- Then $\frac{4}{9} < \frac{1}{2} < \frac{2}{3}$

The teacher should reiterate that for fractions with the same numerators, the smaller the denominator, the greater its value.

This can be an **alternative** to the three previously discussed strategies to quickly arrange the given fractions.

Answers to the Lesson Activity:

A.

1. $\frac{7}{15}, \frac{7}{12}, \frac{7}{10}$

4. $\frac{2}{9}, \frac{1}{3}, \frac{1}{2}, \frac{7}{6}$

2. $\frac{4}{10}, \frac{2}{4}, \frac{9}{8}, 1\frac{1}{2}$

5. $\frac{6}{14}, \frac{3}{2}, 1\frac{2}{7}$

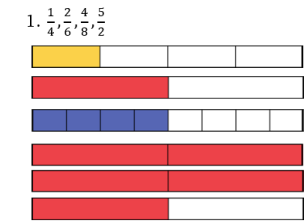
3. $\frac{1}{6}, \frac{5}{10}, \frac{11}{15}, \frac{4}{3}$

	<p>B. Arrange the following sets of dissimilar fractions in descending order by applying any of the strategies discussed.</p> <div><div>1. $\frac{1}{8}, \frac{1}{12}, \frac{1}{5}, \frac{1}{10}$</div><div>2. $\frac{2}{7}, \frac{3}{4}, \frac{12}{28}$</div><div>3. $\frac{10}{5}, \frac{2}{10}, \frac{3}{2}$</div><div>4. $\frac{7}{9}, \frac{2}{2}, \frac{1}{6}, \frac{9}{18}$</div><div>5. $\frac{6}{12}, \frac{3}{8}, \frac{2}{6}, \frac{3}{3}$</div></div>	<p>B.</p> <div><div>1. $\frac{1}{5}, \frac{1}{8}, \frac{1}{10}, \frac{1}{12}$</div><div>2. $\frac{3}{4}, \frac{12}{28}, \frac{2}{7}$</div><div>3. $\frac{10}{5}, \frac{3}{2}, \frac{2}{10}$</div><div>4. $\frac{2}{2}, \frac{7}{9}, \frac{9}{18}, \frac{1}{6}$</div><div>5. $\frac{3}{3}, \frac{6}{12}, \frac{3}{8}, \frac{2}{6}$</div></div>												
<p>D. Developing and Deepening Understanding</p>	<p>1. Learners’ Takeaways</p> <p>The teacher will guide the pupils in completing this table.</p> <table><tr><th><i>Key Ideas/Concepts</i></th><th><i>What I’ve Learned from the Discussion</i></th><th><i>Concepts that are Somewhat Confusing</i></th><th><i>Concepts I Totally Don’t Understand</i></th></tr><tr><td>Ordering dissimilar fractions from smallest to largest, and vice versa using models</td><td></td><td></td><td></td></tr><tr><td>Ordering dissimilar fractions from smallest to largest, and vice versa using different strategies</td><td></td><td></td><td></td></tr></table> <p>2. Reflection on Learning</p> <p>The pupils will complete this statement:</p> <p>“I realized that learning about ordering dissimilar fractions can be fascinating and essential because_____.”</p>	<i>Key Ideas/Concepts</i>	<i>What I’ve Learned from the Discussion</i>	<i>Concepts that are Somewhat Confusing</i>	<i>Concepts I Totally Don’t Understand</i>	Ordering dissimilar fractions from smallest to largest, and vice versa using models				Ordering dissimilar fractions from smallest to largest, and vice versa using different strategies				
<i>Key Ideas/Concepts</i>	<i>What I’ve Learned from the Discussion</i>	<i>Concepts that are Somewhat Confusing</i>	<i>Concepts I Totally Don’t Understand</i>											
Ordering dissimilar fractions from smallest to largest, and vice versa using models														
Ordering dissimilar fractions from smallest to largest, and vice versa using different strategies														

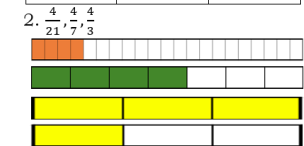
IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		NOTES TO TEACHERS
A. Evaluating Learning	<p>1. Formative Assessment Create visual representations or models for each set of dissimilar fractions. Arrange/order these models in ascending order (nos. 1 – 2) and descending order (nos. 3 – 5). Then, check your answers by applying any of the strategies discussed.</p>	Answers:

No.	Fractions	Illustration/Model	Check using any strategy
1	$\frac{5}{2}, \frac{2}{6}, \frac{4}{8}, \frac{1}{4}$		
2	$\frac{4}{3}, \frac{4}{21}, \frac{4}{7}$		
3	$\frac{1}{4}, \frac{3}{2}, \frac{5}{8}, \frac{1}{2}$		
4	$\frac{2}{5}, 1\frac{1}{10}, \frac{3}{4}, \frac{4}{2}$		
5	$\frac{7}{12}, \frac{3}{6}, \frac{1}{3}, \frac{6}{2}$		

2. Homework (Optional)

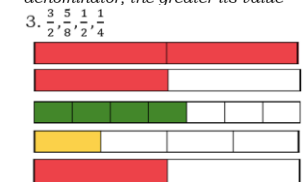


Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{1}{4} < \frac{2}{6}$	$\frac{4}{8}$	$\frac{5}{2}$

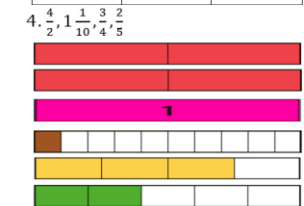


Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{4}{21}$	none	$\frac{4}{7} < \frac{4}{3}$

*For fractions with the same numerators, the smaller the denominator, the greater its value



Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{2} > \frac{5}{8}$



Less than $\frac{1}{2}$	Equal to $\frac{1}{2}$	Greater than $\frac{1}{2}$
$\frac{2}{5}$	none	$\frac{4}{2} > 1\frac{1}{10} > \frac{3}{4}$

B. Teacher's Remarks	<i>Note observations on any of the following areas:</i>	Effective Practices	Problems Encountered	<p>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.</p> <p>Teachers may also suggest ways to improve the different activities explored/lesson exemplar.</p>
	strategies explored			
	materials used			
	learner engagement/ interaction			
	others			
C. Teacher's Reflection	<p>Reflection guide or prompt can be on:</p> <ul style="list-style-type: none"> ▪ <u>principles behind the teaching</u> What principles and beliefs informed my lesson? Why did I teach the lesson the way I did? ▪ <u>students</u> What roles did my students play in my lesson? What did my students learn? How did they learn? ▪ <u>ways forward</u> What could I have done differently? What can I explore in the next lesson? 			<p>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.</p>