8

DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Mathematics

Quarter 1
Lesson
6

Learning Activity Sheet for Mathematics Grade 8
Quarter 1: Lesson 6 (Week 6)
SY 2025-2026

Development Team

Writer:
- Rener D. Daya (University of Mindanao)

Validator:
- Ysmael V. Caballas (Philippine Normal University – South Luzon)

Management Team

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

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Addition and Subtraction of Fractions		
Name:		**Grade & Section:**	

I. Activity No. 1: Short Review (15 mins.)

II. Objective(s): At the end of this activity, the learner should be able to:

a. correctly illustrate the concept of simplifying fractions; and

b. accurately add or subtract fractions.

III. Materials Needed: pen, worksheets

IV. Instructions: Answer the following.

1. Draw lines to match the fraction pairs to their LCM.

$\frac{3}{4}$	$\frac{7}{8}$	$\frac{6}{9}$	$\frac{2}{3}$	$\frac{5}{7}$	$\frac{1}{2}$	$\frac{8}{9}$	$\frac{4}{6}$	$\frac{7}{8}$	$\frac{11}{12}$	$\frac{1}{4}$	$\frac{3}{9}$

14	8	24	9	18	36

2. Solve the following fractions. Write your answer in simplest form.

a) $\frac{1}{4}+\frac{5}{8}=$	b) $\frac{2}{3}+\frac{1}{9}=$	c) $\frac{3}{8}+\frac{2}{16}=$
d) $\frac{1}{2}-\frac{3}{10}=$	e) $\frac{4}{5}-\frac{7}{15}=$	f) $\frac{13}{16}-\frac{5}{32}=$

3. There is a sale on at Bitoy's LSleeves. The number on each long sleeve show what fraction of the original quantity of that color long sleeve is left in stock.

a. What fraction of the orange and blue long sleeves are left in stock?

b. What fraction of the green and white long sleeves are left in stock?

c. What fraction of the pink and black long sleeves have been sold?

d. What fraction of the red and pink long sleeves have been sold?

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Simplifying Rational Algebraic Expression		
Name:		**Grade & Section:**	

I. **Activity No. 2:** Lesson Activity (20 mins.)

II. **Objective(s):** At the end of this activity, the learner should be able to:

a. correctly illustrate the rational algebraic expression

b. correctly simplify the rational algebraic expressions.

III. **Materials Needed:** pen, worksheets

IV. **Instructions:** Simplify the following in its simplest form.

1. $\frac{9m}{21n}$

Solution:

Step 1
Factor the numerator and denominator and get the GCF.
9m =
21n =
GCF:
GCF:
Thus, the common factor is _.

Step 2:
Divide out the common factor.

2. $\frac{9m}{21n}$

Solution:

Step 1
Get the GCF of each term.
$6p^2$ =
2p =
$4p^3$ =
GCF:
GCF:

Step 2:
Factor the common numerator and denominator.
$\frac{6p^2}{2p-4p^3}$ =

Step 3:
Divide out the common factor.

3. $\frac{3x+3y}{x^2-y^2}$

Solution:

Step 1
Factor the common numerator and denominator.

$\frac{3x+3y}{x^2-y^2}$ =

Step 2:
Divide out the common factor.

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Addition or Subtraction Similar Denominator Rational Algebraic Expressions		
Name:		**Grade & Section:**	

I. Activity No. 3: Lesson Activity (20 mins.)

II. Objective(s): At the end of this activity, the learner should be able to accurately add or subtract similar rational algebraic expressions.

III. Materials Needed: pen, worksheets

IV. Instructions: Perform the following operation and simplify if possible.

1. $\frac{3x}{x+1}+\frac{3}{x+1}$

Solution:

2. $\frac{2x-4}{x+1}-\frac{3}{x+1}$

Solution:

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Addition or Subtraction Dissimilar Denominator of Rational Algebraic Expressions		
Name:		**Grade & Section:**	

I. Activity No. 4: Lesson Activity (20 mins.)

II. Objective(s): At the end of this activity, the learner should be able to:

a. illustrate the secondary data; and

b. correctly analyze and interpret the graphical representation of the secondary data.

III. Materials Needed: pen, worksheets

IV. Instructions: Perform the following operation and simplify if possible.

1. $\frac{3x-1}{x}+\frac{2x+2}{x+1}$

Solution:

2. $\frac{2x-4}{x^2-4}-\frac{3x}{x+2}$

Solution:

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Addition or Subtraction Similar/Dissimilar Denominator of Rational Algebraic Expressions		
Name:		**Grade & Section:**	

I. **Activity No. 5:** Reflection Activity (15 mins.)

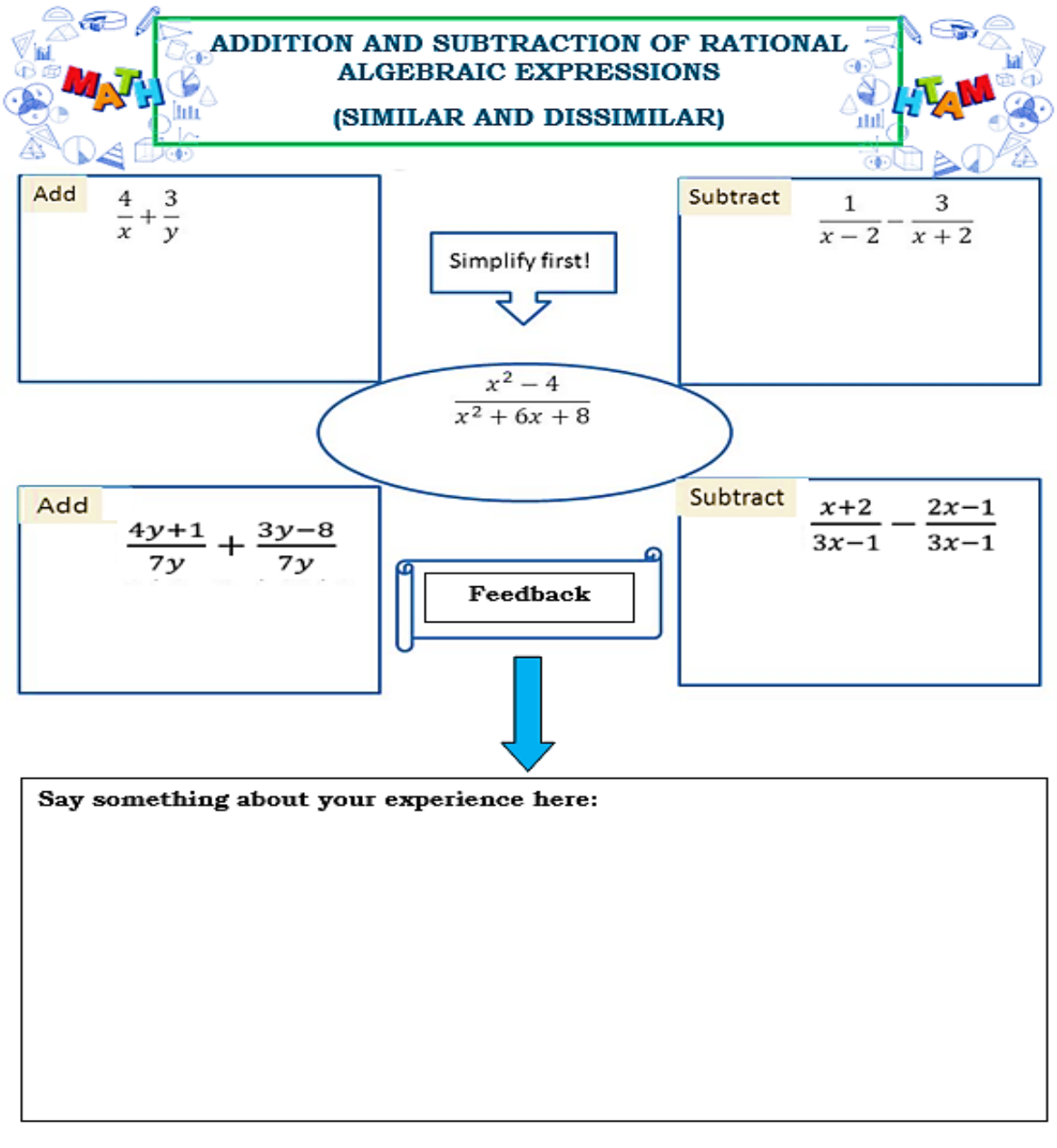
II. **Objective(s):** At the end of this activity, the learner should be able to:

a. correctly simplify the rational algebraic expressions; and

b. accurately add and subtract similar and dissimilar rational algebraic expressions.

III. **Materials Needed:** pen, worksheets

IV. **Instructions:** Perform the following operation and simplify if possible.



LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	6	**Date:**	
Lesson Title/ Topic:	Simplifying Rational Algebraic Expressions Addition and Subtraction Similar Rational Algebraic Expressions Addition and Subtractions Dissimilar Rational Algebraic Expressions		
Name:		**Grade & Section:**	

I. Activity No. 1: Formative Assessment (30 Minutes)

II. Objective(s): At the end of this activity, the learner should be able to:

a. correctly illustrate the rational algebraic expressions;

b. accurately add and subtract similar rational algebraic expressions;

c. accurate add and subtract dissimilar rational algebraic expressions.

III. Materials Needed: pen, worksheets

IV. Instructions: Answer the following.

A. On the space before each number, write TRUE if the statement is correct; otherwise, write FALSE.

1. The expression $\frac{8x^2y^2}{9z^5}$ is simplest form.

2. The expression $\frac{x^2-9}{x-3}$ is in simplest form.

3. The complete factorization of $\frac{x^2-16}{x-4}$ is $\frac{(x-4)(x+4)}{x-4}$.

4. The complete factorization of $\frac{x+3}{x^3+27}$ is $\frac{(x+3)}{(x+3)(x^2+3x+9)}$.

5. The expression $\frac{x^3-8}{x+2}$ is in simplest form.

6. The expression $\frac{6x+18}{9x-3}$ is in simplest form.

7. The complete factorization of $\frac{x^2-8x+15}{x-3}$ is $\frac{(x-3)(x-5)}{x-3}$

8. The complete factorization of $\frac{x^2+x-6}{x+3}$ is $\frac{(x+3)(x-2)}{x+3}$

9. The expression $\frac{m^3-16}{m^2-4}$ is in simplest form.

10. The expression $\frac{x^2-5x+6}{x^2-3x-10}$ is in simplest form.

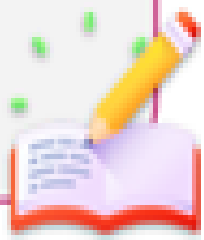
B. Add the following and simplify if possible.

1

$$\frac{(x+5)}{(x+4)} + \frac{(3+x)}{(x+4)} =$$

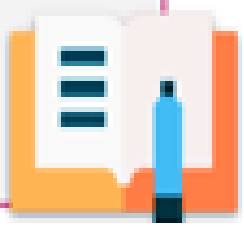
2

$$\frac{(5x+4)}{(2x+3)} + \frac{(x+2)}{(2x+3)} =$$



3

$$\frac{(2x+4)}{(8+3x)} + \frac{(x+7)}{(8+3x)} =$$



4

$$\frac{(2+x)}{(6x+5)} + \frac{(4x+1)}{(6x+5)} =$$

Photo from Helping with Math

C. Perform the following operation as indicated.

1. $\frac{7x}{x-6}+\frac{42}{6-x}$	2. $\frac{14}{15-5x}-\frac{8}{2x-6}$
Solution:	Solution:
3. $\frac{x}{x+2}-\frac{3x}{4x-1}$	4. $\frac{4z}{z^2+z-20}+\frac{z}{z^2-8z+16}$
Solution:	Solution: