8

Learning Activity Sheet for Mathematics

Quarter 1

Lesson

7

Learning Activity Sheet for Mathematics Grade 8
Quarter 1: Lesson 7 (Week 7)
SY 2025-2026

Development Team

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LEARNING ACTIVITY SHEET

Learning Area:	Mathematics	**Quarter:**	1
Lesson No.:	7	**Date:**	
Lesson Title/ Topic:	Multiplication 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 accurately multiply fractions and simplify the answer.

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

IV. **Instructions:** Following "Steps 123" complete the activity below. Write your complete solutions inside the box.

1. $\frac{1}{6} \times \frac{1}{5} = \square$	2. $\frac{2}{5} \times \frac{2}{9} = \square$	3. $\square \times \frac{7}{6} = \frac{2}{3}$	4. $\frac{10}{3} \times \frac{1}{20} = \square$
Solution:	Solution:	Solution:	Solution:

Can you write something here?

LEARNING ACTIVITY SHEET

Learning Area:	Mathematics		Quarter:	1
Lesson No.:	7		Date:	
Lesson Title/ Topic:	Multiplying and Dividing Rational Algebraic Expressions			
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. accurately multiply and divide the rational algebraic expressions; and
   b. accurately solve problems involving operation on rational algebraic expressions.

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

IV. **Instructions:** Answer the following.

A. Multiply the rational algebraic expressions and simplify if possible.

1. $$\dfrac{9r^3 - 54r^2}{9r^2 + 45r} \cdot \dfrac{9r^2 + 9r}{9r^3 - 54r^2}$$	2. $$\dfrac{5r + 50}{r + 10} \cdot \dfrac{r - 2}{5}$$
Solution:	Solution:
Teacher's Feedback:	

B. Divide the rational algebraic expressions and simplify your answers if possible.

1. $$\dfrac{3}{28b} \div \dfrac{3}{b + 1}$$	2. $$\dfrac{4n}{n - 6} \div \dfrac{4n}{8n - 48}$$
Solution:	Solution:
Teacher's Feedback:	

C. Solve the problem below completely.

Working together, Empoy and Bitoy painted a house wall in 8 hours. A year ago, Empoy painted the house wall by himself. The year before, Bitoy painted it by himself but took 12 hours less than Empoy took. How long did Empoy and Bitoy take when each was painting alone?
Solution:
Techer's Feedback:

Learning Area:	Mathematics		**Quarter:**	1
Lesson No.:	7		**Date:**	
Lesson Title/ Topic:	Multiplying and Dividing Rational Algebraic Expressions Solving Problems Involving Operations on Rational Algebraic Expressions			
Name:			**Grade & Section:**	

I.   **Activity No. 3:** Formative Assessment (20 mins.)

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

   a. accurately multiply and divide the rational algebraic expressions; and

   b. accurately solve problems involving operation on rational algebraic expressions.

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

IV. **Instructions:** Answer the following.

A. Perform the following operations as indicated.

1. $\dfrac{n-1}{8n^2} \cdot \dfrac{8n^2}{6n^3 + 48n^2}$	2. $\dfrac{x^2 - 2x + 1}{x+1} \div \dfrac{7x-7}{x+1}$	3. $\dfrac{k^2 - 36}{48 - 2k - k^2} \cdot \dfrac{k+8}{k-3}$
Solution:	Solution:	Solution:
4. $\dfrac{2n+2}{n+1} \div \dfrac{2}{n-6}$	5. $\dfrac{v+3}{v+2} \div \dfrac{8v^2}{8v^3 + 16v^2}$	6. $\dfrac{1}{m-1} \cdot \dfrac{8m^2 + 56m}{m^2 + 13m + 42}$
Solution:	Solution:	Solution:
Teacher's Feedback:		

B. Solve the following problems completely.

1. Tsikoy can swim at a speed of 5 kph in calm water. The time it takes him to swim 4 kilometers upstream is the same as the time it takes to swim 16 kilometers downstream. What is the speed of the current?

   Solution:

$d = rt$	Distances	Rate	Time
Upstream			
Downstream			

2. A boat travels 240 kilometers downstream in the same amount of time it takes to travel 160 kilometers upstream. The current's speed is 5 miles per hour. What is the boat's speed in still water?

   Solution:

$d = rt$	Distances	Rate	Time
Upstream			
Downstream			

3. An airplane flies 910 kilometers with the wind in the same time it takes to travel 660 kilometers against the wind. The airplane's speed in still air is 305kph. What is the wind's speed?

   Solution:

$d = rt$	Distances	Rate	Time
Against the wind			
With the wind			

Learning Area:	Mathematics		Quarter:	1	
Lesson No.:	7		Date:		
Lesson Title/ Topic:	Multiplying and Dividing Rational Algebraic Expressions				
Name:			Grade & Section:		

I. **Activity No. 4:** Homework (Optional)

II. **Objective(s):** At the end of this activity, the learner should be able to accurately multiply and divide the rational algebraic expressions.

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

IV. **Instructions:** Perform the indicated operation.

1. $$\frac{59n}{99} \cdot \frac{80}{33n}$$	2. $$\frac{7n^2(n+4)}{(n-3)(n+4)} \cdot \frac{n-3}{(n+8)(n+6)}$$	3. $$\frac{2n+2}{n+1} \div \frac{2}{n-6}$$
Solution:	Solution:	Solution:

Teacher's Feedback: