

 GRADES 1 to 12 DAILY LESSON LOG	School	Sauyo High School	Grade Level	Grade 8
	Teacher	Mr. Jonathan R. Bacolod, LPT	Learning Area	Mathematics
	Teaching Dates and Time	Week 7, July 15 – 19, 2019	Quarter	1st

I. OBJECTIVES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Learning Competencies/ Objectives:	1. Discuss the steps in simplifying rational expressions; 2. Simplify rational algebraic expressions; and, 3. Exhibit enjoyment and interest in solving problems.	1. Reiterate the steps in evaluating rational expressions; 2. Evaluate rational algebraic expressions; and, 3. Show independence and perseverance in solving problems.	1. Describe the steps in adding and subtracting similar rational algebraic expressions; 2. Perform the steps in adding and subtracting similar rational algebraic expressions; and, 3. Project independence and willingness in solving problems.	1. Discuss the steps in adding and subtracting dissimilar rational algebraic expressions; 2. Perform the steps in adding and subtracting dissimilar rational algebraic expressions; and, 3. Exhibit willingness and interest in solving problems.	1. Restate the steps in multiplying rational algebraic expressions; 2. Find the product of rational algebraic expressions; and, 3. Show perseverance and willingness in solving problems.
II. CONTENT	RATIONAL ALGEBRAIC EXPRESSIONS AND ALGEBRAIC EXPRESSIONS WITH INTEGRAL EXPONENTS				
	Simplifying Rational Expressions	Evaluating Rational Expressions	Adding and Subtracting Similar Rational Algebraic Expressions	Adding and Subtracting Dissimilar Rational Algebraic Expressions	Multiplying Rational Algebraic Expressions
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide Pages	pp. 92–99	pp. 64–71	pp. 100–105	pp. 64–71	pp. 114–124
2. Learner's Materials Pages	pp. 79–85	pp. 55–61	pp. 86–90	pp. 55–61	pp. 98–112
3. Textbook Pages	pp. 106–114	pp. 74–82	pp. 115–121	pp. 74–82	pp. 131–140
4. Additional Materials from Learning Resources Portal					
B. Other Learning Resources	Flashcards	Flashcards	Flashcards	Flashcards	Flashcards

IV. PROCEDURES					
A. Reviewing Previous Lesson or Presenting New Lesson	<p>Simplifying Rational Expressions</p> <p>Simplifying Rational Expressions: reducing the expression in lowest terms</p> <p>How to Simplify Rational Expressions:</p> <ol style="list-style-type: none"> Factor the numerator and denominator completely. Divide any common factors. 	<p>Evaluating Rational Expressions</p> <p>How to Evaluate Rational Expressions:</p> <ol style="list-style-type: none"> Substitute the values of the variables. Simplify the expression. 	<p>Adding and Subtracting Similar Rational Algebraic Expressions</p> <p>How to Add or Subtract Similar Rational Algebraic Expressions:</p> <ol style="list-style-type: none"> Add or subtract the numerators. Simplify the result. <p>In symbols,</p> $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$	<p>Adding and Subtracting Dissimilar Rational Algebraic Expressions</p> <p>How to Add or Subtract Dissimilar Rational Algebraic Expressions:</p> <ol style="list-style-type: none"> Change the expressions into similar rational algebraic expressions using the least common denominator or LCD. Proceed as in adding or subtracting similar fractions. 	<p>Multiplying Rational Algebraic Expressions</p> <p>How to Multiply Rational Algebraic Expressions:</p> <ol style="list-style-type: none"> Factor the numerator and denominator completely. Cancel the common factors. Multiply the remaining factors. <p>In symbols,</p> $\frac{a}{b} \cdot \frac{c}{d} = \frac{ac}{bd}, \quad bd \neq 0$
	B. Establishing a Purpose for the Lesson	The purpose of this lesson is to enable the students to solve real life problems involving simplifying rational expressions.	The purpose of this lesson is to enable the students to solve real life problems involving evaluating rational expressions.	The purpose of this lesson is to enable the students to solve real life problems by adding and subtracting similar rational algebraic expressions.	The purpose of this lesson is to enable the students to solve real life problems by adding and subtracting dissimilar rational algebraic expressions.

C. Discussing New Concepts and Practicing New Skills #1	Practice Exercises Simplify the following rational expressions. <ol style="list-style-type: none"> $\frac{4x+16}{2x}$ $\frac{x-5}{5-x}$ $\frac{3x^3+6x^2}{3x^2}$ $\frac{4x^2-4x+1}{2x-1}$ $\frac{x^2+5x+6}{x+3}$ 	Practice Exercises Evaluate the following rational expressions. <ol style="list-style-type: none"> $40y-1, y=5$ $(p^2-3)^{-2}, p=1$ $\frac{(x-1)^{-2}}{(x+1)^{-2}}, x=2$ $y^{-3}-y^{-2}, y=2$ $a^{-1}b^0, a=2, b=3$ 	Practice Exercises Perform the indicated operation. <ol style="list-style-type: none"> $\frac{6}{2a-6} + \frac{4}{2a-6}$ $\frac{x^2+3x-2}{x^2+2x+4} \div \frac{x^2-4}{x^2-4}$ $\frac{7}{4x-2} - \frac{5}{4x-2}$ $\frac{x^2+3x+2}{x^2-2x+1} \div \frac{x^2-2x+1}{3x+3}$ $\frac{x-2}{x-1} + \frac{1}{x-1}$ 	Practice Exercises Perform the indicated operation. <ol style="list-style-type: none"> $\frac{3}{x+1} + \frac{4}{x}$ $\frac{x+8}{x^2-4x+4} + \frac{3x-2}{x^2-4}$ $\frac{2x}{x^2-9} - \frac{3}{x-3}$ $\frac{3}{x^2-x-2} - \frac{2}{x^2-5x+6}$ $\frac{x+2}{x} - \frac{x+2}{2}$ 	Practice Exercises Find the product of the following rational algebraic expressions. <ol style="list-style-type: none"> $\frac{10uv^2}{3xy^2} \cdot \frac{6x^2y^2}{5u^2v^2}$ $\frac{a^2-b^2}{2ab} \cdot \frac{a^2}{a-b}$ $\frac{x^2-3x}{x^2+3x-10} \cdot \frac{x^2-4}{x^2-x-6}$ $\frac{x^2+2x+1}{y^2-2y+1} \cdot \frac{y^2-1}{x^2-1}$ $\frac{a^2-2ab+b^2}{a^2-1} \cdot \frac{a-1}{a-b}$
D. Discussing New Concepts and Practicing New Skills #2					

E. Developing Mastery	Problem Set Simplify the following rational expressions. <div> <div>1. $\frac{x^2+3x}{x+3}$</div> <div>2. $\frac{2x^2+8x}{2x}$</div> <div>3. $\frac{x^2-16}{x-4}$</div> <div>4. $\frac{x^3+64}{x^2-4x+16}$</div> <div>5. $\frac{2x^2-9x-5}{x-5}$</div> <div>6. $\frac{2x^2+4x}{x+2}$</div> <div>7. $\frac{4x^3-8x^2}{4x^2}$</div> <div>8. $\frac{4x^2-25}{2x-5}$</div> <div>9. $\frac{8x^3-27}{4x^2+6x+9}$</div> <div>10. $\frac{3x^2-12x+12}{x-2}$</div> </div>	Problem Set Evaluate the following rational expressions. <div> <div>1. $\frac{1}{a^{-2}}(a+4), \ a=-8$</div> <div>2. $(p^3-5)^{-2}, \ p=2$</div> <div>3. $\frac{(x-2)^{-3}}{(x+1)^{-3}}, \ x=4$</div> <div>4. $y^{-4}-y^{-3}, \ y=3$</div> <div>5. $\frac{(m-n)^0}{(m+n)^{-1}}, \ m=2, n=3$</div> </div>	Problem Set Perform the indicated operation. <div> <div>1. $\frac{6}{3a-9}-\frac{3}{3a-9}$</div> <div>2. $\frac{x^2-3x-7}{x^2-9}+\frac{x^2-9}{x^2-2x+4}$</div> <div>3. $\frac{7}{3x-6}-\frac{4}{3x-6}$</div> <div>4. $\frac{x^2+2x+2}{x^2-4x+4}-\frac{2x+6}{x^2-4x+4}$</div> <div>5. $\frac{x-2}{x-4}-\frac{2}{x-4}$</div> </div>	Problem Set Perform the indicated operation. <div> <div>1. $\frac{a}{a-b}-\frac{b}{a+b}$</div> <div>2. $\frac{3}{2x+1}+\frac{5}{3x-2}$</div> <div>3. $\frac{3a+12}{2a-8}+\frac{a+4}{a-4}$</div> <div>4. $\frac{y+1}{y}+\frac{y-1}{y+1}$</div> <div>5. $\frac{2x}{x^2-4x+4}-\frac{1}{x-2}$</div> </div>	Problem Set Find the product of the following rational algebraic expressions. <div> <div>1. $\frac{12mn^2}{6xy^2}\cdot\frac{9x^2y^2}{4m^2n^2}$</div> <div>2. $\frac{x^2-y^2}{2xy}\cdot\frac{y^2}{x+y}$</div> <div>3. $\frac{x^2-2x}{x^2-3x-10}\cdot\frac{x^2-4x-5}{x^2-4}$</div> <div>4. $\frac{x^2+4x+4}{x^2+3x+2}\cdot\frac{x^2-1}{x^2-4}$</div> <div>5. $\frac{a^2+2ab+b^2}{a^2-b^2}\cdot\frac{a-b}{a+b}$</div> </div>
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F. Finding Practical Application of Concepts and Skills in Daily Living	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In what real life situations or problems can we observe some examples of simplifying rational expressions?2. How can you apply your knowledge of simplifying rational expressions in solving these real life problems?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In what real life situations or problems can we observe some examples of evaluating rational expressions?2. How can you apply your knowledge of evaluating rational expressions in solving these real life problems?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In what real life situations or problems can we observe some examples of adding and subtracting similar rational algebraic expressions?2. How can you apply your knowledge of adding and subtracting similar rational algebraic expressions in solving these real life problems?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In what real life situations or problems can we observe some examples of adding and subtracting dissimilar rational algebraic expressions?2. How can you apply your knowledge of adding and subtracting dissimilar rational algebraic expressions in solving these real life problems?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In what real life situations or problems can we observe some examples of multiplying rational algebraic expressions?2. How can you apply your knowledge of multiplying rational algebraic expressions in solving these real life problems?
G. Making Generalization and Abstractions about the Lesson	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In your own words, how do we simplify rational expressions?2. How do we solve problems involving algebraic expressions that require simplifying rational expressions?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In your own words, how do we evaluate rational expressions?2. How do we solve problems involving algebraic expressions that require evaluating rational expressions?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In your own words, how do we add or subtract similar rational algebraic expressions?2. How do we solve problems involving algebraic expressions that require adding and subtracting similar rational algebraic expressions?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In your own words, how do we add or subtract dissimilar rational algebraic expressions?2. How do we solve problems involving algebraic expressions that require adding and subtracting dissimilar rational algebraic expressions?	<p>Let the students answer the following questions:</p> <ol style="list-style-type: none">1. In your own words, how do we multiply rational algebraic expressions?2. How do we solve problems involving algebraic expressions that require multiplying rational algebraic expressions?
H. Evaluating Learning					
I. Additional Activities for Application or Remediation					

VI. REMARKS	Objectives have been attained: _____ Objectives were not attained due to: _____	Objectives have been attained: _____ Objectives were not attained due to: _____	Objectives have been attained: _____ Objectives were not attained due to: _____	Objectives have been attained: _____ Objectives were not attained due to: _____	Objectives have been attained: _____ Objectives were not attained due to: _____
VII. REFLECTION					
A. No. of learners who earned 80% in the evaluation	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____
B. No. of learners who require additional activities for remediation who scored below 80%	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____	8-Bohr: _____ out of _____ 8-Copernicus: _____ out of _____ 8-Fleming: _____ out of _____
C. Did the remedial lessons work? No. of learners who have caught up with the lesson	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____
D. No. of learners who continue to require remediation	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____	8-Bohr: _____ 8-Copernicus: _____ 8-Fleming: _____
E. Which of my teaching strategies worked well? Why did these work?					
F. What difficulties did I encounter which my principal or supervisor can help me solve?					
G. What innovation or localized materials did I use/discover which I wish to share with other teachers?					

Checked by:

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