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 16, September 16 – 20, 2019	**Quarter**	2nd	

I. OBJECTIVES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Learning Competencies/ Objectives:	1. State rational equations; 2. Solve solutions to rational equations; and, 3. Project independence and perseverance in solving problems.	1. Describe rational equations; 2. Calculate solutions to rational equations; and, 3. Show interest and independence in solving problems.	1. Describe rational equations; 2. Calculate solutions to rational equations; and, 3. Project perseverance and willingness in solving problems.	1. Describe rational equations; 2. Solve solutions to rational equations; and, 3. Demonstrate willingness and enjoyment in solving problems.	1. Distinguish rational equations; 2. Solve solutions to rational equations; and, 3. Demonstrate determination and self-reliance in solving problems.
II. CONTENT	— RATIONAL ALGEBRAIC EXPRESSIONS AND ALGEBRAIC EXPRESSIONS WITH INTEGRAL EXPONENTS				
	Parallel Lines and Perpendicular Lines	**Systems of Linear Equations in Two Variables**	**Solving Systems of Linear Equations by Graphing**	**Solving Systems of Linear Equations by the Substitution Method**	**Solving Systems of Linear Equations by the Elimination Method**
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide Pages	pp.	pp.	pp.	pp. 246–270	pp. 231–238
2. Learner's Materials Pages	pp.	pp.	pp.	pp. 268–300	pp. 227–233
3. Textbook Pages	pp.	pp.	pp.	pp. 292–310	pp. 231–237
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	**Parallel Lines and Perpendicular Lines**	**Systems of Linear Equations in Two Variables**	**Solving Systems of Linear Equations by Graphing**	**Solving Systems of Linear Equations by the Substitution Method**	**Solving Systems of Linear Equations by the Elimination Method**

	Parallel Lines:
	
	• coplanar lines that do not intersect
	
	• have the same slope
	
	Perpendicular Lines:
	
	• intersecting lines that form 90°
	
	• the slopes are negative reciprocals of each other
		System of Linear Equations:
		
		a. equations that are true for the same pairs of numbers
		
		b. the solution is an ordered pair of numbers that satisfies both equations
		
		A system of linear equations has:
		
		a. only one solution if their graphs intersect at only one point.
		
		b. no solution if their graphs do not intersect.
		
		c. infinitely many solutions if their graphs coincide.
		
		Kinds of Systems of Linear Equations
		
		1. Consistent and Dependent Equations:
		
		   a. has infinitely many solutions
		   b. the slopes of the lines are equal
		   c. the y-intercepts are also equal
		   d. the graphs coincide
			Using the Intercept Method
			
			1. Graph the equations in the same coordinate plane.
			
			2. Determine the coordinates of all the points common to the graphs.
				Procedures for the Substitution Method
				
				1. Solve for one variable in terms of the other variable in one of the equations.
				
				2. Substitute the value of the variable found in the first step of the second equation.
				
				3. Simplify then solve the resulting equation.
				
				4. Substitute the value obtained to any of the original equations.
				
				5. Check the values of the variables obtained against the linear equations in the system.
					Procedures for the Elimination Method
					
					1. Rewrite both equations in standard form.
					
					2. Multiply either equation or both equations by a nonzero number so that the coefficients of x or y will have a sum of 0.
					
					3. Add the resulting equations.
					
					4. Simplify then solve the resulting equation.
					
					5. Substitute the value obtained to any of the original equations.
					
					6. Check the values of the variables obtained against the linear equations in the system.

B. Establishing a Purpose for the Lesson	The purpose of this lesson is to enable the students to solve real life problems involving rational equations.	The purpose of this lesson is to enable the students to solve real life problems involving rational equations.	The purpose of this lesson is to enable the students to solve real life problems involving rational equations.	The purpose of this lesson is to enable the students to solve real life problems involving rational equations.	The purpose of this lesson is to enable the students to solve real life problems involving rational equations.
C. Discussing New Concepts and Practicing New Skills #1	**Practice Exercises** Determine whether the following lines are parallel or perpendicular. 1. $x - 2y = 6; 2x + y = 5$ 2. $2x - y = 6; 4x = 2y - 6$ 3. $3x - y = -2; 3y + 2 = -x$ 4. $6x - 2y = 12; 3x - y = -29$ 5. $3x + 5y = 4; 5x - 3y = 19$	**Practice Exercises** Determine whether each system of linear equations is consistent and dependent, consistent and independent, or inconsistent. 1. $\begin{cases} 2x - y = 7 \\ 3x - y = 5 \end{cases}$ 2. $\begin{cases} x - 2y = -3 \\ 2x + y = 6 \end{cases}$ 3. $\begin{cases} x - 2y = 9 \\ 2x - 4y = 18 \end{cases}$ 4. $\begin{cases} -3x + y = 10 \\ 4x + y = 7 \end{cases}$ 5. $\begin{cases} 6x - 2y = 8 \\ y = 3x - 4 \end{cases}$	**Practice Exercises** Find the solutions of the following systems of linear equations graphically. 1. $\begin{cases} x + y = 12 \\ x - y = 8 \end{cases}$ 2. $\begin{cases} 3x + 6y = 4 \\ 6x + 12y = 8 \end{cases}$ 3. $\begin{cases} 8 = x + y \\ -4 = x - y \end{cases}$ 4. $\begin{cases} x + y = 3 \\ x + y = -2 \end{cases}$ 5. $\begin{cases} x - 8y = 2 \\ 3x - 24y = 6 \end{cases}$	**Practice Exercises** Solve each system of linear equation using the substitution method. 1. $\begin{cases} x - 5y = 4 \\ 2x + y = 7 \end{cases}$ 2. $\begin{cases} 2x + 3y = -13 \\ 5x - 2y = 34 \end{cases}$ 3. $\begin{cases} 5x + 3y = 7 \\ 3x - 5y = -23 \end{cases}$ 4. $\begin{cases} x + y = \dfrac{1}{2} \\ 3x - y = 5 \end{cases}$ 5. $\begin{cases} 7(x - y) = 14 \\ 2x = y + 5 \end{cases}$	**Practice Exercises** Solve each system of linear equation using the elimination method. 1. $\begin{cases} 2x + y = 12 \\ 3x + y = 17 \end{cases}$ 2. $\begin{cases} 3x + 4y = 4 \\ x - 2y = 0 \end{cases}$ 3. $\begin{cases} 6x + 25 = 5y \\ 8x + 9y = 45 \end{cases}$ 4. $\begin{cases} 3x + 4y = 7 \\ 3x + 4y = 8 \end{cases}$ 5. $\begin{cases} 3x + 4y = 19 \\ 7x - 2y = -1 \end{cases}$
D. Discussing New Concepts and Practicing New Skills #2					

E. Developing Mastery	**Problem Set**	**Problem Set**	**Problem Set**	**Problem Set**	**Problem Set**
	Determine whether the following lines are parallel or perpendicular.	Determine whether each system of linear equations is consistent and dependent, consistent and independent, or inconsistent.	Find the solutions of the following systems of linear equations graphically.	Solve each system of linear equation using the substitution method.	Solve each system of linear equation using the elimination method.
	1. $2x-3y=6; 3x+2y=5$ 2. $2y-x=6; x=2y+6$ 3. $-4x+8y=2; -6x+1=3y$ 4. $2x+3y=12; 6y=-4x+8$ 5. $3x+4y=4; 4x-3y=9$	1. $\begin{cases} 8x+2y=7 \\ y=-4x+1 \end{cases}$ 2. $\begin{cases} x-2y = 9 \\ x+3y = 14 \end{cases}$ 3. $\begin{cases} x+3y = 8 \\ x-3y = 8 \end{cases}$ 4. $\begin{cases} 2y = 6x-5 \\ 3y = 9x+1 \end{cases}$ 5. $\begin{cases} 3x+5y = 15 \\ 4x-7y = 10 \end{cases}$	1. $\begin{cases} y = \frac{2}{3}x+6 \\ y = -\frac{3}{2}x+6 \end{cases}$ 2. $\begin{cases} x+y = 7 \\ x-y = 1 \end{cases}$ 3. $\begin{cases} 4x-y = 8 \\ 3x+2y = 6 \end{cases}$ 4. $\begin{cases} x+4y = 8 \\ x-2y = 2 \end{cases}$ 5. $\begin{cases} x+y=5 \\ y=5x+\frac{1}{2} \end{cases}$	1. $\begin{cases} 2x-y = 2 \\ 6x+5y = 2 \end{cases}$ 2. $\begin{cases} x-3y = 1 \\ -2x+6y = 5 \end{cases}$ 3. $\begin{cases} x-3y = 1 \\ -2x+6y = -2 \end{cases}$ 4. $\begin{cases} x+y = 11 \\ 3x-y = 5 \end{cases}$ 5. $\begin{cases} 3x=4y-3 \\ 3x+2y=9 \end{cases}$	1. $\begin{cases} 2x-3y = 12 \\ 4x+3y = 24 \end{cases}$ 2. $\begin{cases} 5x+11 = 7y \\ 8y-18 = 3x \end{cases}$ 3. $\begin{cases} 3x+4y = 7 \\ 2x-2y = 7 \end{cases}$ 4. $\begin{cases} x=y+1 \\ x-y=1 \end{cases}$ 5. $\begin{cases} 2x+y = 4 \\ x+2y = 4 \end{cases}$
F. Finding Practical Application of Concepts and Skills in Daily Living	Let the students answer the following questions: 1. In what real life situations or problems can we observe some examples of rational equations? 2. How can you apply your knowledge of rational equations in solving these real life problems?	Let the students answer the following questions: 1. In what real life situations or problems can we observe some examples of rational equations? 2. How can you apply your knowledge of rational equations in solving these real life problems?	Let the students answer the following questions: 1. In what real life situations or problems can we observe some examples of rational equations? 2. How can you apply your knowledge of rational equations in solving these real life problems?	Let the students answer the following questions: 1. In what real life situations or problems can we observe some examples of rational equations? 2. How can you apply your knowledge of rational equations in solving these real life problems?	Let the students answer the following questions: 1. In what real life situations or problems can we observe some examples of rational equations? 2. How can you apply your knowledge of rational equations in solving these real life problems?

G. Making Generalization and Abstractions about the Lesson	Let the students answer the following questions: 1. In your own words, what are rational equations? 2. How do we solve rational equations?	Let the students answer the following questions: 1. In your own words, what are rational equations? 2. How do we solve rational equations?	Let the students answer the following questions: 1. In your own words, what are rational equations? 2. How do we solve rational equations?	Let the students answer the following questions: 1. In your own words, what are rational equations? 2. How do we solve rational equations?	Let the students answer the following questions: 1. In your own words, what are rational equations? 2. How do we solve rational equations?
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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