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 1, January 3 – 7, 2019	Quarter	1st

I. OBJECTIVES	DAY 1	DAY 2	DAY 3	DAY 4
Learning Competencies/ Objectives:	1. Demonstrate the steps in squaring binomials; 2. Determine the missing terms of a perfect square trinomial; and, 3. Display determination and independence in solving problems.	1. Define the steps in squaring trinomials; 2. Calculate the missing terms of a square of a trinomial; and, 3. Project interest and independence in solving problems.	1. Derive the formula in finding the product of a sum and a difference; 2. Find the product of a sum and a difference; and, 3. Project determination and willingness in solving problems.	1. Discuss the steps in finding the cube of a binomial; 2. Solve the cube of a binomial; and, 3. Demonstrate interest and willingness in solving problems.
II. CONTENT	**SPECIAL PRODUCTS AND FACTORS**			
	Squaring Binomials	**Squaring Trinomials**	**Product of a Sum and a Difference**	**Cube of a Binomial**
III. LEARNING RESOURCES				
A. References				
1. Teacher's Guide Pages	pp. 1–7	pp. 8–15	pp. 16–21	pp. 22–29
2. Learner's Materials Pages	pp. 1–6	pp. 7–13	pp. 14–18	pp. 19–25
3. Textbook Pages	pp. 1–8	pp. 9–17	pp. 18–23	pp. 24–32
4. Additional Materials from Learning Resources Portal				
B. Other Learning Resources	Flashcards	Flashcards	Flashcards	Flashcards
IV. PROCEDURES				

A. Reviewing Previous Lesson or Presenting New Lesson	**Squaring Binomials** The square of a binomial consists of: • the square of the first term; • twice the product of the first and last terms; and • the square of the last term. **Perfect square trinomial:** the square of a binomial To square binomials, use $(a+b)^2 = a^2+2ab+b^2$ $(a-b)^2 = a^2-2ab+b^2$ How to square binomials: 1. Square the first term. 2. Get the product of the first and last terms, then multiply the product by 2. 3. Square the last term	**Squaring Trinomials** How to Square Trinomials: 1. Find the sum of the squares of the first, second and last terms. 2. Get the product of the first and the second terms, then multiply by 2. 3. Get the product of the first and the last terms, then multiply by 2. 4. Get the product of the second and the last terms, then multiply by 2 To square trinomials, use $(a+b+c)^2 = a^2+b^2+c^2+2ab+2ac+2bc$	**Product of a Sum and a Difference** The product of the sum of two terms $(a+b)$ and difference of the same terms $(a-b)$ is the difference of the squares of the two terms. The product is always a binomial. In symbols, $(x+y)(x-y) = (x-y)(x+y) = x^2-y^2.$	**Cube of a Binomial** To find the cube of a binomial of the form $(x+y)^3$: 1. Find the cube of each term to get the first and the last terms. 2. The second term is three times the product of the square of the first term and the second term. 3. The third term is three times the product of the first term and the square of the second term. In symbols, $(x+y)^3 = x^3+3x^2y+3xy^2+y^3.$
B. Establishing a Purpose for the Lesson	The purpose of this lesson is to enable the students to solve real life problems involving squaring binomials.	The purpose of this lesson is to enable the students to solve real life problems involving squaring trinomials.	The purpose of this lesson is to enable the students to solve real life problems involving the product of a sum and a difference.	The purpose of this lesson is to enable the students to solve real life problems involving the cube of a binomial.

C. Discussing New Concepts and Practicing New Skills #1	**Practice Exercises** A. Square each binomial. 1. $(n+4)^2$ 2. $(2n-1)^2$ 3. $(2-3n^2)^2$ 4. $(2a+3b)^2$ 5. $(-2x^2-y^4)^2$	**Practice Exercises** A. Square each trinomial. 1. $(m+n-2r)^2$ 2. $(a-3b-c)^2$ 3. $(4h^2+i+2k)^2$ 4. $(-3x-2y-4z)(-3x-2y-4z)$ 5. $(5m+2n^3-r)^2$	**Practice Exercises** Multiply the following binomials. 1. $(n-2d)(n+2d)$ 2. $(a+2b)(a-2b)$ 3. $(-2x+y^2)(-2x-y^2)$ 4. $(\frac{3}{4}c-\frac{2}{3}d)(\frac{3}{4}c+\frac{2}{3}d)$ 5. $(-3mn^2-2p)(-3mn^2+2p)$	**Practice Exercises** Cube each binomial. 1. $(x+5)^3$ 2. $(a-3b)^3$ 3. $(4h^2+2k)^3$ 4. $(-3x-2y)^3$ 5. $(5m+2n^2)^3$
D. Discussing New Concepts and Practicing New Skills #2	B. Fill in the blanks. 1. $(x-3y)^2 = x^2-\_\_\_\_+9y^2$ 2. $(2m+n^2)^2 = \_\_\_\_ + 4mn^2+n^4$ 3. $(-3a^2-2b^3)^2 = 9a^4+\_\_\_\_+4b^6$ 4. $(-mn^2+3p^2)^2 = \_\_\_\_ - 3mn^2p^2+9p^4$ 5. $(5b^2c^3-2d^3)^2 = 25b^4c^6-\_\_\_\_+4d^6$	B. Fill in the blanks. 1. $(x-3y+z)^2 = x^2+\_\_\_\_+z^2-6xy+\_\_\_\_-6yz$ 2. $(2m+n^2-3p)^2 = 4m^2+n^4+9p^2+\_\_\_\_-12mp-\_\_\_\_$ 3. $(-3a^2-2b^3+c)^2 = \_\_\_\_+4b^6+c^2+\_\_\_\_-6a^2c-4b^3c$ 4. $(-mn^2+3p^2-2q)^2 = m^2n^4+9p^4+4q^2-\_\_\_\_+\_\_\_\_-12p^2q$ 5. $(-2a+5b^2c^3-2d^3)^2 = 4a^2+25b^4c^6+\_\_\_\_-\_\_\_\_+8ad^3-20b^2c^3d^3$		B. Fill in the blanks. 1. $(x-3y)^3 = x^3-\_\_\_\_+27xy^2-\_\_\_\_$ 2. $(2x+z^2)^3 = 8x^3+\_\_\_\_+\_\_\_\_+z^6$ 3. $(-3t^2-2y^3)^3 = -27t^6-\_\_\_\_-36t^2y^6-\_\_\_\_$ 4. $(-xy^2+3z^2)^3 = \_\_\_\_+9x^2y^4z^2-\_\_\_\_+27z^6$ 5. $(x^2y^3-2z^3)^3 = x^6y^9-\_\_\_\_+\_\_\_\_-8z^9$

E. Developing Mastery	**Problem Set**	**Problem Set**	**Problem Set**	**Problem Set**
	A. Square each binomial. 1. $(3a+4)^2$ 2. $(4n-1)^2$ 3. $(2m^2-3n^3)^2$ 4. $(-5x+2y^2)^2$ 5. $(-3n-2y^3)^2$ B. Fill in the blanks. 1. $(3x-y)^2 = 9x^2 - \_\_\_\_ + y^2$ 2. $(3m+2n^2)^2 = \_\_\_\_ + 12mn^2+4n^4$ 3. $(-2a^3-5b^2)^2 = 4a^6 + \_\_\_\_ + 25b^4$ 4. $(-m^3n^2+2p^3)^2 = \_\_\_\_ - 4m^3n^2p^3+4p^6$ 5. $(4b^3c^2-3d^4)^2 = 16b^6c^4 - \_\_\_\_ + 9d^8$	A. Square each trinomial. 1. $(2m-n+3r)^2$ 2. $(-4a+2b-c)^2$ 3. $(3h^2-2i+k)^2$ 4. $(5x+3y+2z)(5x+3y+2z)$ 5. $(2m-4n^3-2r)^2$ B. Fill in the blanks. 1. $(2x-y+3z)^2 = 4x^2+y^2+ \_\_\_\_ - 4xy+12xz- \_\_\_\_$ 2. $(3x+2y^2-z)^2 = 9x^2+4y^4+ z^2+ \_\_\_\_ - \_\_\_\_ - 4y^2z$ 3. $(-x^2-3y^3+2z)^2 = x^4+ 9y^6+4z^2+ \_\_\_\_ -4x^2z- \_\_\_\_$ 4. $(-tx^2+2y^2-3z)^2 = t^2x^4+ \_\_\_\_ + 9z^2 - \_\_\_\_ + 6tx^2z - 12y^2z$ 5. $(-4t+2x^2y^3-3z^3)^2 = 16t^2+4x^4y^6+9z^6 - \_\_\_\_ + 24tz^3 - \_\_\_\_$	Multiply the following binomials. 1. $(3n-p)(3n+p)$ 2. $(b+4cd^2)(b-4cd^2)$ 3. $(3a+2bc^2)(3a-2bc^2)$ 4. $(\frac{4}{5}c-\frac{3}{4}d)(\frac{4}{5}c+\frac{3}{4}d)$ 5. $(-3m-2np^3)(-3m+2np^3)$	A. Cube each binomial. 1. $(2m+3r)^3$ 2. $(-4a-c)^3$ 3. $(3h^2-2i)^3$ 4. $(5x+3y)^3$ 5. $(2m-4n^3)^3$ B. Fill in the blanks. 1. $(2x-y)^3 = 8x^3 - \_\_\_\_ + \_\_\_\_ - y^3$ 2. $(3x+z^3)^3 = \_\_\_\_ + \_\_\_\_ + 9xz^6+z^9$ 3. $(-2t^2-y^3)^3 = -8t^6 - \_\_\_\_ - \_\_\_\_ - y^9$ 4. $(-3xy^2+z^2)^3 = -27x^3y^6 + \_\_\_\_ - \_\_\_\_ + z^6$ 5. $(3x^3y^2-2z^2)^3 = \_\_\_\_ - \_\_\_\_ + 36x^3y^2z^4 - 8z^6$

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 squaring binomials? 2. How can you apply your knowledge of squaring binomials 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 squaring trinomials? 2. How can you apply your knowledge of squaring trinomials 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 the product of a sum and a difference? 2. How can you apply your knowledge of product of a sum and a difference 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 cubing binomials? 2. How can you apply your knowledge of cubing binomials 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 perfect square trinomials? 2. How do we solve problems involving the square of binomials?	Let the students answer the following questions: 1. In your own words, how do we square trinomials? 2. How do we solve problems involving squaring trinomials?	Let the students answer the following questions: 1. In your own words, how do we get the product of a sum and a difference? 2. How do we solve problems involving the product of a sum and a difference?	Let the students answer the following questions: 1. In your own words, how do we get the cube of a binomial? 2. How do we solve problems involving the cube of a binomial?
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: _____
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 _____

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 _____
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: _____
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: _____
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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