I. OBJECTIVES	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Learning Competencies/ Objectives:	1. Identify the cube roots of algebraic expressions; 2. Find the factors of the sum or difference of two cubes; and, 3. Show independence and independence in solving problems.	1. State the steps in factoring perfect square trinomials; 2. Calculate the square roots of given algebraic expressions; and, 3. Display independence and independence in solving problems.	1. Tell the steps in factoring trinomials with 1 as leading coefficient; 2. Compute the factors of trinomials with 1 as leading coefficient; and, 3. Project enjoyment and enjoyment in solving problems.	1. Distinguish the steps in factoring by grouping with factoring the greatest common monomial factor; 2. Solve the factors of an algebraic expression using the grouping method; and, 3. Demonstrate willingness and willingness in solving problems.	1. Define the steps in factoring general trinomials; 2. Calculate the factors of general trinomials; and, 3. Display perseverance and perseverance in solving problems.
II. CONTENT	SPECIAL PRODUCTS AND FACTORS				
	Factoring the Sum or Difference of Two Cubes	Factoring Perfect Square Trinomials	Factoring Trinomials with 1 as Leading Coefficient	Factoring by Grouping	Factoring General Trinomials
III. LEARNING RESOURCES					
A. References					
1. Teacher's Guide Pages	pp. 44–49	pp. 50–57	pp. 58–63	pp. 72–77	pp. 64–71
2. Learner's Materials Pages	pp. 38–42	pp. 43–49	pp. 50–54	pp. 62–66	pp. 55–61
3. Textbook Pages	pp. 50–56	pp. 57–66	pp. 67–73	pp. 83–89	pp. 74–82
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	Factoring the Sum or Difference of Two Cubes	Factoring Perfect Square Trinomials	Factoring Trinomials with 1 as Leading Coefficient	Factoring by Grouping	Factoring General Trinomials

	Steps in Factoring the Sum or Difference of Two Cubes:
	
	A. To find the binomial factor:
	
	  a. Find the cube root of the first cube.
	  b. Find the cube root of the second cube, then affix the sign of the second cube.
	
	B. To find the trinomial factor:
	
	  a. Square the first term of the binomial factor.
	  b. Multiply the first and second terms of the binomial factor, then affix the sign that is opposite the sign of the second term.
	  c. Square the second term of the binomial factor.
	
	In symbols,
	
	$x^3 + y^3 = (x+y)(x^2 - xy + y^2)$
	
	$x^3 - y^3 = (x-y)(x^2 + xy + y^2)$
		Perfect Square Trinomial:
		
		• the result of squaring a binomial
		
		• has first and last terms which are perfect squares and a middle term which is twice the product of the square root of the first and last terms
		
		Steps in Factoring Perfect Square Trinomials:
		
		1. Get the square root of the first and last terms.
		
		2. List down the square root as sum or difference of two terms as the case may be.
		
		In symbols,
		
		$a^2 + 2ab + b^2 = (a+b)^2$
		
		$a^2 - 2ab + b^2 = (a-b)^2$
			Steps in Factoring Trinomials with 1 as Leading Coefficient:
			
			1. Find the square root of the first term.
			
			2. List down all the factors of the last term.
			
			3. Identify which factor pair sums up to the middle term.
			
			4. Write each factor in the pairs as the last term of the binomial factor
				Steps in Factoring by Grouping:
				
				1. Group the terms with a common factor.
				
				2. Factor out the greatest common monomial factor in each group.
				
				3. Factor out the common binomial factor.
					Steps in Factoring Trinomials of the Form $ax^2 + bx + c$
					
					1. Find the product of the first and the last term.
					
					2. Find the factors of the product whose sum equals the middle term.
					
					3. Replace the middle term with the sum of the factors.
					
					4. Perform Factoring by Grouping.

B. Establishing a Purpose for the Lesson	The purpose of this lesson is to enable the students to solve real life problems by factoring the sum or difference of two cubes.	The purpose of this lesson is to enable the students to solve real life problems by factoring perfect square trinomials.	The purpose of this lesson is to enable the students to solve real life problems by factoring trinomials with 1 as leading coefficient.	The purpose of this lesson is to enable the students to solve real life problems by using factoring by grouping.	The purpose of this lesson is to enable the students to solve real life problems by factoring general trinomials.
C. Discussing New Concepts and Practicing New Skills #1	**Practice Exercises** Factor the following polynomials completely. 1. $x^3 + 64y^3$ 2. $8x^3 - y^3 z^6$ 3. $a^9 + 125b^6$ 4. $27m^3 - 8n^3$ 5. $64a^3 - 27b^3 c^6$	**Practice Exercises** Factor the following polynomials completely. 1. $x^2 - 12xy + 36y^2$ 2. $x^2 + 10x + 25$ 3. $9a^2 - 36ab + 36b^2$ 4. $3m^2 + 18mn + 27n^2$ 5. $a^4 c^2 - 6a^2 bc + 9b^2$	**Practice Exercises** Factor the following polynomials completely. 1. $x^2 - x - 20$ 2. $x^2 + 17x + 72$ 3. $a^2 + 10a + 24$ 4. $m^2 + 4mn - 21n^2$ 5. $2a^3 - 6a^2 - 36a$ 6. $3x^3 - 27x^2 y + 54xy^2$	**Practice Exercises** Factor the following polynomials completely. 1. $4wt + 2wh + 6it + 3ih$ 2. $15te - 12he + 10ty - 8hy$ 3. $hv + av + he + ae$ 4. $10ti - 8ts - 15hi + 12hs$ 5. $88fo + 16ro - 99fm - 18rm$	**Practice Exercises** Factor the following polynomials completely. 1. $6x^2 + x - 2$ 2. $3x^2 + x - 2$ 3. $2a^2 - a - 6$ 4. $4m^2 + 3m - 1$ 5. $3a^2 + a - 4$
D. Discussing New Concepts and Practicing New Skills #2					

E. Developing Mastery	Problem Set	Problem Set	Problem Set	Problem Set	Problem Set
	Factor the following polynomials completely.	Factor the following polynomials completely.	Factor the following polynomials completely.	Factor the following polynomials completely.	Factor the following polynomials completely.

Column 2 (Problem Set):

1. $27x^3 - 64y^3 z^6$
2. $8x^3 + 125$
3. $64a^3 - 8b^9 c^3$
4. $27m^3 + 125n^3$
5. $64a^3 + 27$
6. $8x^9 y^3 - 64z^6$
7. $216x^3 + 8y^9$
8. $a^3 b^6 - 64c^9 d^3$
9. $125m^3 - 27n^6$
10. $216a^6 + 64b^9$

Column 3 (Problem Set):

1. $16x^2 - 24xy + 9y^2$
2. $4x^2 + 20x + 25$
3. $49a^2 - 84ab + 36b^2$
4. $121m^4 + 66m^2 n + 9n^2$
5. $64a^2 - 32ab + 4b^2$
6. $4x^4 y^2 - 12x^2 yz^3 + 9z^6$
7. $9x^2 y^2 + 30xyz^2 + 25z^4$
8. $16x^4 - 24x^2 y + 9y^2$
9. $36x^2 - 84xy^3 + 49y^6$
10. $4x^2 + 28x + 49$

Column 4 (Problem Set):

1. $x^2 + 4x - 21$
2. $x^2 - 5x - 14$
3. $2a^3 + 20a^2 + 48a$
4. $m^2 + m - 12$
5. $a^2 - 8a - 48$
6. $3m^2 + 6mn - 45n^2$
7. $2b^3 + 10b^2 c - 28bc^2$
8. $c^2 - 11cd + 24d^2$
9. $5m^3 - 20m^2 + 15m$
10. $4a^2 + 24a - 64$

Column 5 (Problem Set):

1. $7am + 35bm + 9ad + 45bd$
2. $42wa + 54wt + 56da + 72dt$
3. $36yw - 24nb + 12bw - 72yn$
4. $72he + 16we + 27hn + 6wn$
5. $26wy - 91by + 35bd - 10wd$
6. $12bc + 15be - 8cd - 10de$
7. $10ep - 25eq + 2fp - 5fq$
8. $8mp - 12mq - 6np + 9nq$
9. $12ax^2 + 15ay + 16b^2 x^2 + 20b^2 y$
10. $15a^3 c^2 - 12a^3 d^3 - 10b^2 c^2 + 8b^2 d^3$

Column 6 (Problem Set):

1. $3x^2 + 7x + 4$
2. $2x^2 + 3x - 9$
3. $6a^2 + 11a + 3$
4. $4m^2 - 5m - 6$
5. $3a^2 - a - 4$
6. $4m^2 - 11mn + 6n^2$
7. $3a^2 - 7ab - 6b^2$
8. $4c^2 - 19cd - 5d^2$
9. $10x^2 - 27xy + 18y^2$
10. $6m^2 - 7mn - 3n^2$

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 factoring the sum or difference of two cubes? 2. How can you apply your knowledge of factoring the sum or difference of two cubes 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 factoring perfect square trinomials? 2. How can you apply your knowledge of factoring perfect square 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 factoring trinomials with 1 as leading coefficient? 2. How can you apply your knowledge of factoring trinomials with 1 as leading coefficient 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 factoring by grouping? 2. How can you apply your knowledge of factoring by grouping 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 factoring general trinomials? 2. How can you apply your knowledge of factoring general trinomials 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, how do we find the factors of the sum or difference of two cubes? 2. How do we solve problems involving algebraic expressions that require factoring the sum or difference of two cubes?	Let the students answer the following questions: 1. In your own words, how do we factor perfect square trinomials? 2. How do we solve problems involving algebraic expressions that require factoring perfect square trinomials?	Let the students answer the following questions: 1. In your own words, how do we factor trinomials with 1 as leading coefficient? 2. How do we solve problems involving algebraic expressions that require factoring trinomials with 1 as leading coefficient?	Let the students answer the following questions: 1. In your own words, how do we factor by grouping? 2. How do we solve problems involving algebraic expressions that require factoring by grouping?	Let the students answer the following questions: 1. In your own words, how do we factor general trinomials? 2. How do we solve problems involving algebraic expressions that require factoring general trinomials?
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?					