

Math 10 Pre-Calculus LG 5

FACTORING



INTRODUCTION:

Factoring is one of the skills you will need throughout the rest of your math courses so learn it well.



LEARNING GUIDE EXPECTATIONS:

On the completion of this learning guide you will be able to:

- 1) determine prime factors, greatest common factors, and least common multiples of whole numbers.
- 2) determine the common factor of polynomials.
- 3) factor trinomials.
- 4) factor a difference of squares (special trinomial).



EVALUATION:

You are ready to progress to the next learning guide when you can demonstrate your understanding of the above expectations. Please refer to your Mathematics 10 Pre-Calc Marks Record Sheet to determine the assessment.



RESOURCES NEEDED:



Mathematics 10 Text



Algebra Tiles

LEARNING ACTIVITIES:



Expectation #1: Determine prime factors, greatest common factors, and least common multiples of whole numbers.

Expectation #2: Determine the common factor of polynomials.



1. [Watch and take notes on instructional video on factors and multiples.](#)



2. [Watch and take notes on instructional video on common factors of polynomials.](#)



3. Complete the investigation on page 215 #2 – 8.
4. Read Link the Ideas on page 216.
5. Work through example 1 on page 216 and then complete #1-4 on page 220.



6. In your Math Journal, define Greatest Common Factor (GCF) and Least Common Multiple (LCM) and give an example of each.



7. Work through Examples #2 and 3 on page 217 and then read “Key Ideas” on pages 219-220 and then complete #5, 6, and 7 on page 221.



8. In your Math Journal, describe using an example, how to determine the common factor of a polynomial.



9. Work through Example 4 on page 218 and then complete pages 222-223 #12, 13, 15, 16.
10. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).



Expectation #3: Factor trinomials.



1. [Watch and take notes on instructional video on Factoring Trinomials.](#)



2. Sign out the Algebra Tiles kit from the Science Kiosk



3. Read page 224 and complete Investigate Factoring Trinomials #1-5.
4. Read Link the Ideas on page 226 (Do **not** read the part under the heading “Factor Trinomials of the Form $(ax^2 + bx + c, a \neq 1)$).
5. Work through Example 1 on pages 227-228 and then read the first round bullet of Key Ideas on page 233 and then complete 1, 3, 4 and 5 on page 234.



6. In your Math Journal, complete #6 on page 225.



7. Read Link the Ideas on page 226 starting with the heading “Factor Trinomials of the Form $ax^2 + bx + c, a \neq 1$ ”).
8. Work through Example 2 on pages 229-231 and then read Key Ideas - the second and third round bullets on page 233 and then complete #2, 6 and 7 on pages 234-235.



9. In your Math Journal, describe how to factor a trinomial of the form $ax^2 + bx + c, a \neq 1$. Use an example to illustrate your work.



10. Work through Example 3 on pages 231-232.
11. Complete pages 235-236 #8, 9, 11, 13.
12. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).



Expectation #4: Factor a difference of squares (special trinomial).



1. [Watch and take notes on instructional video on Factoring Special Trinomials.](#)



1. Read page 328 and page 241.
2. Work through Examples 1 & 2 on pages 242-245.
3. Read Key Ideas on page 246.
4. Complete page 246-247 #1 – 7.



5. In your Math Journal, describe how to factor a difference of squares and a perfect square trinomial. Use an example to illustrate each.
6. Complete pages 247-250 #8, 14, 17, 19, 20.
7. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).

REVIEW AND CHALLENGE



1. Complete Chapter 5 Review page 252 #6-14.

PRACTICE QUIZZES

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)

[Practice quiz #5](#)