

Foundations of Math 10 LG 4&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 Foundations 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 $x^2 + bx + c, a \neq 1$. 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, 15.
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 #1 \(only do questions #5-12\)](#)

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)

[Practice quiz #5](#)