

Math 12 Pre-Calculus LG 2

TRANSFORMATIONS – PART B

INTRODUCTION:

This learning guide will explore combining transformations of functions as well as determining the inverse of a relation.

LEARNING GUIDE EXPECTATIONS:

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

- 1) sketch the graph of a function with multiple transformations.
- 2) write the equation of a function that has multiple transformations.
- 3) sketch the graph of the inverse of a function.
- 4) determine the equation of an inverse.

EVALUATION:

Complete the LG 2 assessment quiz in the test centre.


RESOURCES NEEDED:


 Math 12 Pre-Calc Text


 THSS Math 12 Pre-Calc Learning Guides.

 www.thssmath.com

LEARNING ACTIVITIES:

 **Expectation #1:** Sketch the graph of a function with multiple transformations.

 **Expectation #2:** Write the equation of a function that has multiple transformations.

 1. [Watch and take notes on instructional video on Combining Transformations.](#)

 2. In the textbook, read Link the Ideas on page 34.

3. In the textbook, work through Examples 1 – 3 on pages 34 – 38 and complete each corresponding Your Turn.



4. Read Key Ideas on page 38. In your math journal, describe how a , b , h and k affects the function $y = af(b(x - h) + k$. What order are the transformations completed in?



5. In the textbook, complete pages 38-42 #1 – 6, 8 – 11, 15, 17, C4 (for the musicians!)



Expectation #3: Sketch the graph of the inverse of a function.



Expectation #4: Determine the equation of an inverse.



1. [Watch and take notes on instructional video on Inverse of a Function.](#)



2. In the textbook, read page 44 and complete the Investigate the Inverse of a Function activity on pages 44-45.

3. Read Link the Ideas on page 46. Work through Examples 1 - 3 on pages 46 - 50 and then complete the corresponding Your Turn questions.



4. Read Key Ideas on page 51. In your journal, describe the properties of an inverse function.



5. In the textbook, complete pages 51 - 55 #2, 3, 4, 5, 6, 8, 9, 12, 16, 19.

REVIEW AND CHALLENGE



1. In the textbook, complete Chapter 1 Review pages 56 - 57 #9 - 17.

2. Complete Chapter 1 Practice Test pages 58-59 #9 – 12, 15.

PRACTICE QUIZZES

[Practice Test #1](#)

[Practice Test #2](#)

[Practice Test #3](#)

[Practice Test #4](#)

Key Terms: inverse, horizontal line test, one-to-one function.