

Math 12 Pre-Calculus LG 4

RADICAL FUNCTIONS



INTRODUCTION:

You can model many situations using radical functions. Check out pages 60-61.



LEARNING GUIDE EXPECTATIONS:

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

- 1) Sketch the graph of a radical function and identify its properties such as domain, range and intercepts.
- 2) Sketch the graph of $y = \sqrt{f(x)}$ given the graph of $y = f(x)$.
- 3) Solve radical equations graphically and algebraically.



EVALUATION:

Write the LG 4 assessment quiz.



RESOURCES NEEDED:



Math 12 Pre-Calc Text



Math 12 Pre-Calc Learning Guides.



sd42onlinemath.yolasite.com

LEARNING ACTIVITIES:



Expectation #1: Sketch the graph of a radical function and identify its properties such as domain, range and intercepts.



1. [Watch and take notes on instructional video on Radical Functions & Transformations.](#)



2. In the textbook, read Link the Ideas on page 63.

3. Work through Examples 1 – 4 on pages 63 – 71 and complete the corresponding “Your Turn” questions.



4. Read Key Ideas on page 72. In your math journal, sketch the graph of $y = \sqrt{x}$ and describe its properties.



5. In the textbook, complete pages 72-77 #1 – 5, 8, 10 – 14, 16, C1.



Expectation #2: Sketch the graph of $y = \sqrt{f(x)}$ given the graph of $y = f(x)$.



1. [Watch and take notes on instructional video on Square Root Functions.](#)



2. Read Link the Ideas on page 80. Work through Examples 1-3 on pages 80 – 85 and complete the corresponding Your Turn questions.



3. Read Key Ideas on page 85. In your journal, describe how to graph the function $y = \sqrt{f(x)}$ if you are given the graph of $y = f(x)$.



4. In the textbook, complete pages 86 – 89 #1 – 8, 11, 16.



Expectation #3: Solve radical equations graphically and algebraically.



1. [Watch and take notes on instructional video on Solving Radical Equations.](#)



2. Complete Investigate Solving Radical Equations Graphically on page 90.

3. Read Link the Ideas on page 91. Work through Examples 1-4 on pages 91 – 95 and complete the corresponding Your Turn questions.



4. Read Key Ideas on page 96. In your journal, describe how to solve a radical equation algebraically and graphically. Use an example to illustrate both methods.



5. In the textbook, complete pages 96 – 98 #1 – 7, 9, 11, 15.

REVIEW AND CHALLENGE



1. In the textbook, complete Chapter 2 Review pages 99 - 101 #1 – 18

2. Complete Chapter 2 Practice Test pages 102 – 103 #1 – 15.

Key Terms: radical function, square root of a function.

PRACTICE QUIZZES

[Practice quiz #1](#)

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)