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 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 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