

Foundations of Math 12 LG 14

Polynomial Functions



INTRODUCTION:

A graph is a common form of showing how data being collected can be related. Most data that is collected never form straight lines, so a different method of displaying this data in equation form is needed. Understanding how polynomial equations look as graphs, and the functions that provide these graphs will help you understand how to predict trends and patterns. This guide will introduce you to the different concepts around polynomial functions and their graphs.



LEARNING GUIDE EXPECTATIONS:

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

- 1) graph polynomial functions and describe their properties.
- 2) describe the characteristics of equations of polynomial functions.
- 3) model data with a line of best fit.
- 4) model data with a curve of best fit.



EVALUATION:

Complete the LG 14 quiz.



RESOURCES NEEDED:



Foundations of Mathematics 12 Text.

LEARNING ACTIVITIES:



Expectation #1: Graph polynomial functions and describe their properties.



1. [Watch and take notes on instructional video on Exploring the Graphs of Polynomial Functions.](#)



2. In the Foundations of Mathematics 12 text, read Section 6.1 and work through “Explore the Math” on pages 380-381.
3. Read “In Summary” on page 382.
4. Complete #1, 2, 3, 4 on page 383.



Expectation #2: Describe the characteristics of equations of polynomial functions.



1. [Watch and take notes on instructional video on Characteristics of the Equations of Polynomial Functions.](#)



2. In the Foundations of Mathematics 12 text, in Section 6.2, work through Examples 1-3 on pages 385-391.
3. Read “In summary” on page 392.
4. Complete #1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 13, 15, and 17 on pages 393-397.



Expectation #3: Model data with a line of best fit.



1. [Watch and take notes on instructional video on Modelling Data with a Line of Best Fit.](#)



2. In the Foundations of Mathematics 12 text, in Section 6.3 work through Examples 1-2 on pages 402-406.
3. Read “In Summary” on page 407.
4. Complete #4, 5, 6, 7, 9, 10, and 11 on pages 408-411.



Expectation #4: Model data with a curve of best fit.



1. [Watch and take notes on instructional video on Modelling Data with a Curve of Best Fit.](#)



2. In the Foundations of Mathematics 12 text, in Section 6.4 work through Examples 1-2 on pages 414-418.
3. Read “In Summary” on page 418.
4. Complete #3, 4, 6, 7, 9, 10, and 11 on pages 420-422.

REVIEW

Now that you have completed some practice questions, you could review by doing any of the following:

- Chapter Self-Test on page 424.
- Practicing on page 427-428.
- LG 14 practice quizzes located [here](#).

Once you are ready, email your teacher for the LG 14 quiz.