

Math 10 Pre-Calc LG 12

SOLVING SYSTEMS OF LINEAR EQUATIONS GRAPHICALLY



INTRODUCTION:

The ability to quantify situations and compare ... Check out pages 414 & 415.



LEARNING GUIDE EXPECTATIONS:

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

- 1) solve and verify systems of linear equations graphically.
- 2) model and solve linear systems of equations.
- 3) explain why systems of linear equations may have zero, one, or an infinite number of solutions.



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 Math 10 Pre-Calc Marks Record Sheet to determine the assessment.



RESOURCES NEEDED:



Mathematics 10 Text

LEARNING ACTIVITIES:



Expectation #1: Solve systems of linear equations graphically.



1. [Watch and take notes on instructional video on Graphing Systems of Equations.](#)



2. Read page 416. Complete the “Investigate Ways to Represent Linear Systems”.

3. Read Link the Ideas on page 417.



4. In your Math Journal:

- a) describe what a system of linear equation is.
- b) define the term point of intersection and explain its significance.
- c) illustrate how to solve a system of equations graphically.



5. Work through Examples 1, 2, & 3 on pages 418-423 and then complete #3, 5 on page 427.

6. Read Key Ideas on page 426.



7. In your math journal, explain how to verify a solution to a system of linear equations.



8. Complete #4, 6, 7, 8, 9, 10, 11, 12, 19, 20 & 23 on pages 427-431.

9. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).



Expectation #2: Model and solve linear systems of equations.



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



2. Read Link the Ideas on page 433 and work through Example 1 on page 434 & 435. Now complete #1, 5 on pages 440-441.

3. Work through Examples 2 and 3 on pages 436-438. Read Key Ideas on page 439.



4. In your math journal, describe some strategies that can help you to model and solve systems of linear equations.



5. Complete #2, 3, 6, 7, 8, 11, 14, 16, 18 and 19 on pages 440-444.

6. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).



Expectation #3: Explain why systems of linear equations may have zero, one, or an infinite number of solutions.



1. [Watch and take notes on instructional video on Number of Solutions to a System of Equations.](#)



2. Read Link the Ideas on pages 447-448 and work through Example 1 on pages 448 - 450.

3. Complete #1 on page 454.

4. Work through Example 2 on pages 451 – 452 and complete #2 on page 455.

5. Work through Example 3 on page 453 and complete #3 on page 455.

6. Read Key Ideas on page 454.



7. In your math journal:

a) draw a graph that shows a system of linear equations with one solution and explain how you can tell from the equations that it will only have 1 solution.

b) draw a graph that shows a system of linear equations with no solution and explain how you can tell from the equations that it will have no solution.

c) draw a graph that shows a system of linear equations with an infinite number of solutions and explain how you can tell from the equations that it will have an infinite number of solutions.



8. Complete #5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, & 17 on pages 454-459.

9. For extra practice, click [here](#). For the answers to the extra practice, click [here](#).

REVIEW AND CHALLENGE



1. Complete Chapter 8 Review pages 460-462 #1, 2, 4, 5, 6, 8, 9, 10, 11, 12 & 13.



2. In the Mathematics 10 text, complete Chapter 8 Practice Test pages 463-465 #1-14.

PRACTICE QUIZZES

[Practice quiz #2](#)

[Practice quiz #3](#)

[Practice quiz #4](#)

[Practice quiz #5](#)