

# Math 9A LG 10

## LINEAR RELATIONS



### INTRODUCTION:

Lines show a relationship between two quantities and they can be represented by a data table, graph, or equation.



### LEARNING GUIDE EXPECTATIONS:

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

- 1) Graph lines using a table of values.
- 2) Read graphs, including interpolation and extrapolation.
- 3) Graph and analyze linear relations.
- 4) Graph horizontal and vertical lines



### 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 Mathematics 9 Marks Record Sheet to determine the assessment.



### RESOURCES NEEDED:



Math Links 9 Text



THSS Math 9 Learning Guides and Math 9 Journal Entries Package



Ruler



Graph Paper

### LEARNING ACTIVITIES:



**Expectation #1: Graph lines using a table of values.**



**[1. Watch and take notes on instructional video on Linear vs. Nonlinear.](#)**

**\*Watch the first 1 ½ minutes ONLY**



**[2. Watch and take notes on instructional video on Graphing Using a Table of Values.](#)**



**3. In your math journal, complete the journal entry for LG10 Expectation 1.**



**Expectation #2: Read graphs, including interpolation and extrapolation.**



**1. Watch and take notes on instructional video on Reading Graphs.**

2. In the Math Links 9 text, work through Example 1 on page 222. Now complete #4, 5, 6, 7 on pages 226-227.

3. In the Math Links 9 text, work through Example 2 on pages 223-224. Now complete #8, 9, 10, 11 on page 227



4. Read Key Ideas on page 225. In your math journal, complete the journal entry for LG10 Expectation 2.



5. In the Math Links 9 text, complete #13, 14, 17 on pages 228-229.



**Expectation #3: Graph and analyze linear relations.**



**1. Watch and take notes on instructional video on Graphing Using Point & Slope.**



2. In your math journal, complete the journal entry for LG10 Expectation 3, Part A - Slope



**3. Watch and take notes on instructional video on Graphing Using  $y = mx + b$ .**



4. In your math journal, complete the journal entry for LG10 Expectation 3, Part B – Equation of a line ( $y = mx + b$ )



6. In the Math Links 9 text, complete #6, 10, 11(a), 13 on pages 239-241.



**Expectation #4: Graph horizontal and vertical lines**



1. In the Math Links 9 text, work through Example 3 on page 237.



2. Read Key Ideas on page 238. In your math journal, complete the journal entry for LG 10 Expectation 4.



3. In the Math Links 9 text, complete #7(a), #11, and #12(c) on pages 240-241.

### REVIEW AND CHALLENGE



1. In the Math Links 9 text, complete Chapter 6 Review pages 244-245 #1, 2, 4, 5, 9, 10.