

Algebra

Goal: The learner will demonstrate an understanding of linear relations and fundamental algebraic concepts.

Objective:

5.01 Identify, analyze, and create linear relations, sequences, and functions using symbols, graphs, tables, diagrams, and written descriptions.

To achieve this objective, students should:

- Develop an algebraic representation of a pattern or sequence.
- Make a table that shows the relationship between two variables.
- Make a graph that shows the relationship between two variables by identifying the two variables, choosing an axis for each, and selecting an appropriate scale for each axis.
- Identify patterns, sequences and linear relationships in various forms using written descriptions.
- Make predictions using tables, graphs, diagrams, symbols, and written descriptions of patterns, sequences, and linear relationships.
- Translate among different representations of algebraic expressions, equations, tables, and graphs.

Note: *When identifying, analyzing and representing graphs of linear relationships seventh grade students are only expected to translate from a linear equation (already formed) and/or its table of values to the graph.*

- Identify a rate of change in the context of a problem.
- Use the data values in a table to describe a rate of change to solve problems.
- Use counting strategies to discover a rate of change given a graph to solve problems.
- Solve problems using a diagram to identify a rate of change.
- Recognize and write ratios to describe different situations.

Note: *This is NOT using the slope formula $m = \frac{y_2 - y_1}{x_2 - x_1}$*