

Lines, Lines, Lines!

A Detailed Study of Linear Equations.

by
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Unit

I. Introduction & Overview

A. Grade Level

B. Objectives and Rationale for Unit

II. Annotated Internet Links

A. Teacher

B. Student

III. Teaching Strategies & Lessons

A. Slope of a line:

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

1. Lesson Plan.
2. Find the slope between two points.
Examples
3. Determine the slope of a given line.
Examples
4. Find a point - given a point and a slope.
Examples
5. Student Practice Worksheet.
6. Worksheet Answer Key and Rubric.
7. Quiz.
8. Quiz Answer Key and Rubric.

B. Slope-Intercept Form of a line: $y = mx + b$

1. Lesson Plan.
2. Write an equation given two points.





Examples

3. Write an equation in slope-intercept form.

Examples

4. Graph equations in slope-intercept form.

Examples

5. Student Practice Worksheet.
6. Worksheet Answer Key and Rubric.
7. Quiz
8. Quiz Answer Key and Rubric

C. Point-Slope Form of a line: $y - y_1 = m(x - x_1)$

1. Lesson Plan.
2. Write an equation in Point-Slope Form given a slope and a point.

Examples.

3. Write an equation given two points.

Examples.

4. Student Practice Worksheet.
5. Worksheet Answer Key and Rubric.
6. Quiz.
7. Quiz Answer Key and Rubric.

D. Standard Form of a linear equation: $Ax + By = C$

1. Lesson Plan.
2. Write an equation in Standard Form from the given linear equation.

Examples.

3. Write an equation in Standard Form given a point and a slope.

Examples.

4. Write an equation in Standard Form given two points.

Examples.

5. Student Practice Worksheet.
6. Worksheet Answer Key and Rubric.
7. Quiz
8. Quiz Answer Key and Rubric.

E. Equations for horizontal and vertical lines.

1. Lesson Plan.
2. Understand the nature of horizontal and vertical Lines.
3. Write an equation for a horizontal line.

Examples.

4. Write an equation for a vertical line.



Examples.

5. Graph the given Horizontal and vertical lines

Examples.

6. Student Practice Worksheet.

7. Worksheet Answer Key and Rubric.

8. Quiz.

9. Quiz Answer Key & Rubric.

F. parallel & perpendicular lines

1. Lesson Plan.

2. Understand differences and similarities between parallel and perpendicular lines.

3. Determine if two lines are parallel or perpendicular.

Examples.

4. Write the equation of a line given one point and a parallel line.

Examples.

5. Write the equation of a line given one point and a perpendicular line.

Examples.

6. Student Practice Worksheet.

7. Worksheet Answer key and Rubric.

8. Quiz.

9. Quiz Answer Key and Rubric.

IV. Power Point Presentations

v. Video Clips