Learning Targets

Linear Relationships

Lesson 1: Understanding Proportional Relationships

- I can graph a proportional relationship from a story.

- I can use the constant of proportionality to compare the pace of different animals.

Lesson 2: Graphs of Proportional Relationships

- I can graph a proportional relationship from an equation.

- I can tell when two graphs are of the same proportional relationship even if the scales are different.

Lesson 3: Representing Proportional Relationships

- I can scale and label a coordinate axes in order to graph a proportional relationship.

Lesson 4: Comparing Proportional Relationships

- I can compare proportional relationships represented in different ways.

Lesson 5: Introduction to Linear Relationships

- I can find the rate of change of a linear relationship by figuring out the slope of the line representing the relationship.

Lesson 6: More Linear Relationships

- I can interpret the vertical intercept of a graph of a real-world situation.

- I can match graphs to the real-world situations they represent by identifying the slope and the vertical intercept.

Lesson 7: Representations of Linear Relationships

- I can use patterns to write a linear equation to represent a situation.

- I can write an equation for the relationship between the total volume in a graduated cylinder and the number of objects added to the graduated cylinder.

Grade8 Unit 3 Linear Relationships

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Lesson 8: Translating to $y = mx + b$

- I can explain where to find the slope and vertical intercept in both an equation and its graph.

- I can write equations of lines using y=mx+b.

Lesson 9: Slopes Don't Have to be Positive

- I can give an example of a situation that would have a negative slope when graphed.

- I can look at a graph and tell if the slope is positive or negative and explain how I know.

Lesson 10: Calculating Slope

- I can calculate positive and negative slopes given two points on the line.

- I can describe a line precisely enough that another student can draw it.

Lesson 11: Equations of All Kinds of Lines

- I can write equations of lines that have a positive or a negative slope.

- I can write equations of vertical and horizontal lines.

Lesson 12: Solutions to Linear Equations

- I know that the graph of an equation is a visual representation of all the solutions to the equation.

- I understand what the solution to an equation in two variables is.

Lesson 13: More Solutions to Linear Equations

- I can find solutions (x, y) to linear equations given either the x- or the y-value to start from.

Lesson 14: Using Linear Relations to Solve Problems

- I can write linear equations to reason about real-world situations.