

Learning Targets

Proportional Relationships

Lesson 1: Proportional Relationships and Equations

- I can write an equation of the form $y = kx$ to represent a proportional relationship described by a table or a story.
- I can write the constant of proportionality as an entry in a table.

Lesson 2: Two Equations for Each Relationship

- I can find two constants of proportionality for a proportional relationship.
- I can write two equations representing a proportional relationship described by a table or story.

Lesson 3: Using Equations to Solve Problems

- I can find missing information in a proportional relationship using the constant of proportionality.
- I can relate all parts of an equation like $y = kx$ to the situation it represents.

Lesson 4: Comparing Relationships with Tables

- I can decide if a relationship represented by a table could be proportional and when it is definitely not proportional.

Lesson 5: Comparing Relationships with Equations

- I can decide if a relationship represented by an equation is proportional or not.

Lesson 6: Solving Problems about Proportional Relationships

- I can ask questions about a situation to determine whether two quantities are in a proportional relationship.
- I can solve all kinds of problems involving proportional relationships.

Lesson 7: Graphs of Proportional Relationships

- I can find the constant of proportionality from a graph.
- I know that the graph of a proportional relationship lies on a line through $(0, 0)$.

Lesson 8: Using Graphs to Compare Relationships

- I can compare two, related proportional relationships based on their graphs.
- I know that the steeper graph of two proportional relationships has a larger constant of proportionality.

Lesson 9: Two Graphs for Each Relationship

- I can interpret a graph of a proportional relationship using the situation.
- I can write an equation representing a proportional relationship from a graph.

Lesson 10: How Well Can You Measure?

- I can examine quotients and use a graph to decide whether two associated quantities are in a proportional relationship.
- I understand that it can be difficult to measure the quantities in a proportional relationship accurately.

Lesson 11: Exploring Circles

- I can describe the characteristics that make a shape a circle.
- I can identify the diameter, center, radius, and circumference of a circle.

Lesson 12: Exploring Circumference

- I can describe the relationship between circumference and diameter of any circle.
- I can explain what π means.

Lesson 13: Applying Circumference

- I can choose an approximation for π based on the situation or problem.
- If I know the radius, diameter, or circumference of a circle, I can find the other two.

Lesson 14: Estimating Areas

- I can calculate the area of a complicated shape by breaking it into shapes whose area I know how to calculate.

Lesson 15: Area of a Circle

- I know the formula for area of a circle.
- I know whether or not the relationship between the diameter and area of a circle is proportional and can explain how I know.

Lesson 16: Applying Area of Circles

- I can calculate the area of more complicated shapes that include fractions of circles.
- I can write exact answers in terms of π .

Lesson 17: Four Representations

- I can make connections between the graphs, tables, and equations of a proportional relationship.
- I can use units to help me understand information about proportional relationships.

Lesson 18: Using Water Efficiently

- I can answer a question by representing a situation using proportional relationships.

Lesson 19: Distinguishing Circumference and Area

- I can decide whether a situation about a circle has to do with area or circumference.
- I can use formulas for circumference and area of a circle to solve problems.

Lesson 20: Stained-Glass Windows

- I can apply my understanding of area and circumference of circles to solve more complicated problems.