## 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.



© CC BY Open Up Resources. Adaptations CC BY IM.