 # Slide 1: Title Slide

Ratio, Proportion, and Rates of Change

Introduction to Key Concepts

 # Slide 2: Lesson 1 Overview

Understanding Ratios and Proportions

- Objective: Understand ratios and proportions
- Activities: Introduction, Interactive Discussion, Guided Practice, Group Activity, Wrap-Up

 # Slide 3: Introduction to Ratios

Introduction to Ratios

- **Definition:** A ratio is a comparison of two quantities.
- **Example:** 3:4 (3 red balls to 4 blue balls)

 # Slide 4: Introduction to Proportions

Introduction to Proportions

- **Definition:** A proportion is an equation stating that two ratios are equal.
- **Example:** 3:4 is equivalent (equal) to 6:8

 # Slide 5: Part:Part vs. Part:Whole Ratios

Part:Part vs. Part:Whole Ratios

- **Part:Part:** Compares two parts of a whole (e.g., 3:4)
- **Part:Whole:** Compares one part to the whole (e.g., 3:7)

 # Slide 6: Real-Life Examples

Real-Life Examples

- **Recipes:** Ingredients in a recipe (e.g., 2 cups of flour to 1 cup of sugar)
- **Maps:** Distance on a map (e.g., 1 inch = 10 miles)

 # Slide 7: Expressing Quantities as Fractions

Expressing Quantities as Fractions

- **Example:** 3 red balls out of 7 total balls = 3/7
- **Activity:** Convert given ratios to fractions

 # Slide 8: Simplifying Ratios

Simplifying Ratios

- **Example:** Simplify 6:8 to 3:4
- **Activity:** Practice simplifying given ratios

 # Slide 9: Converting Between Fractions and Ratios

Converting Between Fractions and Ratios

- **Example:** (\frac{3}{4}) as a ratio is 3:4
- **Activity:** Convert given fractions to ratios and vice versa

 # Slide 10: Group Activity

Group Activity

- **Task:** Solve problems involving ratios and proportions
- **Instructions:** Work in groups, discuss solutions, and present findings

 # Slide 11: Lesson 2 Overview

Lesson 2: Applying Ratios and Proportions

- Objective: Apply ratios and proportions to real-world problems
- Activities: Warm-Up, Case Study, Independent Practice, Group Activity, Wrap-Up

 # Slide 12: Scale Factors and Diagrams

Scale Factors and Diagrams

- **Definition:** A scale factor is a number used to multiply the dimensions of a figure to enlarge or reduce it.
- **Example:** Map scales (e.g., 1 inch = 10 miles)

 # Slide 13: Case Study

Case Study: Map Scales

- **Problem:** Calculate the real distance between two points on a map.
- **Solution:** Use the scale factor to convert map distance to real distance.

 # Slide 14: Independent Practice

Independent Practice

- **Task:** Solve problems on dividing quantities into ratios and using scale diagrams
- **Instructions:** Complete worksheets and discuss solutions

 # Slide 15: Group Activity

Group Activity

- **Task:** Create scale diagrams based on given ratios
- **Instructions:** Work in groups, create diagrams, and present findings

 # Slide 16: Wrap-Up and Q&A

Wrap-Up and Q&A

- **Summary:** Key points from the lessons
- **Q&A:** Address any questions
- **Homework:** Additional practice problems