



Introduction to Direct Proportion

Read the following introduction to direct proportion and answer the questions that follow:

Direct proportion is a fundamental concept in mathematics that helps students understand the relationship between two quantities that change together in a consistent manner.

1. What is direct proportion?

2. Give an example of a direct proportion relationship in real life.

3. What is the equation of direct proportion?

Identifying Direct Proportion Relationships

Identify whether the following relationships are direct proportion:

1. Distance traveled vs. time taken: Yes / No

2. Amount of water vs. amount of sugar needed to make a certain type of juice: Yes / No

3. Force applied vs. resulting acceleration: Yes / No

Writing the Equation of Direct Proportion

Write the equation of direct proportion for the following relationships:

1. Distance traveled (d) vs. time taken (t): $d = \underline{\hspace{2cm}}t$

2. Amount of water (w) vs. amount of sugar needed (s): $w = \underline{\hspace{2cm}}s$

3. Force applied (F) vs. resulting acceleration (a): $F = \underline{\hspace{2cm}}a$

Solving Problems Involving Direct Proportion

Solve the following problems using the equation of direct proportion:

1. A car travels 250 miles in 5 hours. How many miles will it travel in 8 hours?

2. A bakery sells 200 loaves of bread per day. If they make a profit of \$0.50 per loaf, how much profit do they make in a day?

3. A water tank can hold 1000 liters of water. If 500 liters of water are already in the tank, what percentage of the tank is filled?

Real-World Applications of Direct Proportion

Research and find a real-world example of direct proportion. Write a short report on your findings.

Review and Reflection

Answer the following questions to review and reflect on what you have learned:

1. What did you learn about direct proportion in this worksheet?

2. What challenges did you face while completing this worksheet?

3. How can you apply the concept of direct proportion in your everyday life?

Answer Key

Check your answers with the following answer key:

Section 1: Understanding Direct Proportion

1. Direct proportion is a relationship between two quantities that change together in a consistent manner.
2. Example: Distance traveled vs. time taken
3. $y = kx$

Section 2: Identifying Direct Proportion Relationships

1. Yes
2. Yes
3. Yes

Section 3: Writing the Equation of Direct Proportion

1. $d = 50t$
2. $w = 0.5s$
3. $F = 2a$

Section 4: Solving Problems Involving Direct Proportion

1. 400 miles
2. \$100
3. 50%

