

Lesson 9-1 • Group 2

## Reinforce Understanding

### 9.1 Small Group • Group 2

I can recognize when two quantities change together, and identify which one is the independent variable and which is the dependent variable, explain how I can tell, and judge a case I have not seen before.

#### Worked model

Jaden walks dogs after school. The more hours he walks, the more money he earns. Which variable is independent, and which is dependent?

1. Name the two quantities: hours walked and money earned.
2. Which is chosen? Jaden picks his hours — hours walked is the independent variable.
3. Which responds? The money changes because the hours change — money earned is dependent.
4. Sentence check: 'Money earned depends on hours walked.' The sentence makes sense.

**Answer: Independent variable: hours walked. Dependent variable: money earned.**

#### Practice

Complete each exercise. Show the reasoning that supports your answer.

#### 1. Two quantities are related. Which statement is ALWAYS true?

Circle the letter of the best answer. Show how you know.

- A. The independent variable is always the larger number
- B. The independent variable is subject to choice
- C. The dependent variable is always measured in dollars
- D. The independent variable is always listed first in a table

Show your work

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#### 2. Which question would you ask to find the DEPENDENT variable?

Circle the letter of the best answer. Show how you know.

- A. Which quantity responds when the other one changes?
- B. Which quantity is larger?
- C. Which quantity has units?
- D. Which quantity comes first alphabetically?

Show your work

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#### 3. Claire decides to walk instead of jog for the same 30 minutes. What happens to the two variables?

Circle the letter of the best answer. Show how you know.

- A. Calories burned becomes the independent variable
- B. Neither is a variable any more
- C. Time stays the independent variable; Calories burned still depends on it
- D. Time becomes the dependent variable

Show your work

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