

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## **ACCELERATION**

### Understanding Main Ideas

*If the statement is true, write true. If it is false, change the underlined word or words to make the statement true.*

- \_\_\_\_\_ 1. If a train is slowing down, it is accelerating.
- \_\_\_\_\_ 2. To find the acceleration, you must calculate the change in distance during each unit of time.
- \_\_\_\_\_ 3. A Ferris wheel turning at a constant speed of 5 m/s is not accelerating.
- \_\_\_\_\_ 4. An airplane is flying west at 200 km/h. Two hours later, it is flying west at 300 km/h. Its acceleration is 100 km/h<sup>2</sup>.

### Calculating Acceleration

*Use the following equation to calculate the acceleration for each problem.*

$$\text{acceleration} = \frac{\text{final velocity} - \text{initial velocity}}{\text{time}} \qquad a = \frac{V_f - V_i}{t}$$

5. If a man is riding at a velocity of 18 m/s and 8 seconds later is riding at a velocity of 22 m/s, what is his acceleration?

FORMULA:
SUBSTITUTION:
ANSWER:

6. As a roller coaster starts down a hill, its speed is 10 m/s. Three seconds later its speed is 34 m/s. What is the roller coaster's acceleration?

FORMULA:
SUBSTITUTION:
ANSWER: