## UNIT 3 • MODELING AND ANALYZING QUADRATIC FUNCTIONS

Lesson 3: Interpreting and Analyzing Quadratic Functions

## Lesson 3.3.3: Identifying the Average Rate of Change <br> Warm-Up 3.3.3

Data on a certain car shows that its gas mileage can be modeled by a linear function. The car yields 45 miles per gallon (mpg) when driven at 40 miles per hour ( mph ) and 25 mpg when driven at 80 mph .

1. What is the rate of change of this car's gas mileage?
2. Create the linear model of the car's gas mileage as a function of its speed.
3. What does the rate of change in this model tell you about the car's gas mileage? Explain.
