UNIT 3 • MODELING AND ANALYZING QUADRATIC FUNCTIONS Lesson 3: Interpreting and Analyzing Quadratic Functions

Lesson 3.3.3: Identifying the Average Rate of Change

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.