



Personal Tutors Chapter 3

Personal Tutor Activity 3.1 – Classify Data Collection Techniques

- 1. Apply** A manufacturing plant produces 10 different types of bolts that are used in manufacturing automobiles. The quality control department is testing 25 bolts from each shipment of 1000 bolts of each type. Identify the sample and population from which the bolts are selected. Then determine what type of sampling (simple, stratified, or systematic) has been used.
- 2. Starting Hint** Note that 25 bolts from each shipment of each type are sampled.

Personal Tutor Activity 3.2 – Compare Unit Rates

- 1. Apply** John, an engineering student, is constructing a scaled model of a bridge for a class project. He must purchase lumber to complete this project. John has found two ways to purchase his lumber. He can purchase it in two-foot lengths or in ten-foot lengths. The two-foot length of lumber would save John time because he would not have to cut the lumber down to be able to use it. Each two-foot length of lumber costs \$2.05. Each ten-foot length of lumber costs \$7.95. Which is the most economical way to purchase the lumber? Why did you make this choice?
- 2. Starting Hint** Set up the data in two ratios and simplify them to compare price per foot.