CHAPTER TEST A



Rates



Concepts and Skills (Questions 1 and 2: 2 × 1 point = 2 points, Questions 3 to 6: 4 × 2 points = 8 points)

State whether each statement is expressed as a unit rate.

- 1. Enrico runs 100 meters in 15 seconds.
- 2. A television station shows 15 commercials in 1 hour.

Solve. Show your work.

- **3.** A machine can fill 650 bottles in 25 minutes. What is the unit rate at which the machine fills the bottles?
- **4.** A developer buys 1.2 acres of land at \$41,000 per acre. How much does he pay for the land?
- **5.** A train travels 25 miles in 20 minutes. What is the train's speed in miles per hour?
- **6.** Water flows out of a tap at a rate of 1.5 gallons per minute. At this rate, how much water will flow out of the tap in $\frac{1}{2}$ hour?

Problem Solving (Question 7: 2 points, Questions 8 to 10: 3 × 3 points = 9 points, Question 11: 4 points)

Solve. Show your work.

7. The table shows the postage charges for sending letters to Country X.

| First ounce | 79¢ |
|-----------------------|-----|
| Each additional ounce | 55¢ |

How much is the postage for a letter weighing 8 ounces?

8. Compare the prices of vegetables below.

| Type of Vegetable | Quantity Purchased | Amount Paid |
|-------------------|--------------------|-------------|
| Tomatoes | 3 lb | \$4.80 |
| Green Beans | 5 lb | \$13 |

Which vegetable costs more per pound?

9. Rudolpho takes 12 minutes to run 6 times around a 400-meter track. Assuming he runs at a constant speed, how long does he take to run 1 kilometer?