Lesson 18 Practice Problems

1. Elena is designing a logo in the shape of a parallelogram. She wants the logo to have an area of 12 square inches. She draws bases of different lengths and tries to compute the height for each.

   a. Write an equation Elena can use to find the height, h, for each value of the base, b.

   b. Use your equation to find the height of a parallelogram with base 1.5 inches.

2. Han is planning to ride his bike 24 miles.

   a. How long will it take if he rides at a rate of:

      3 miles per hour?   4 miles per hour?   6 miles per hour?

   b. Write an equation that Han can use to find t, the time it will take to ride 24 miles, if his rate in miles per hour is represented by r.

   c. On graph paper, draw a graph that shows t in terms of r for a 24-mile ride.

3. The graph of the equation $V = 10s^3$ contains the points $(2, 80)$ and $(4, 640)$.

   a. Create a story that is represented by this graph.

   b. What do the points mean in the context of your story?

4. You find a brass bottle that looks really old. When you rub some dirt off of the bottle, a genie appears! The genie offers you a reward. You must choose one:

$50,000 or a magical $1 coin.

The coin will turn into two coins on the first day. The two coins will turn into four coins on the second day. The four coins will double to 8 coins on the third day. The genie explains the doubling will continue for 28 days.

   a. Write an equation that shows the number of coins, n, in terms of the day, d.

   b. Create a table that shows the number of coins for each day for the first 15 days.

   c. Create a graph for days 7 through 12 that shows how the number of coins grows with each day.

5. At a market, 3.1 pounds of peaches cost $7.72. How much did the peaches cost per pound? Explain or show your reasoning. Round your answer to the nearest cent.

(From Unit 5, Lesson 13.)

6. Andre set up a lemonade stand last weekend. It cost him $0.15 to make each cup of lemonade, and he sold each cup for $0.35.

   a. If Andre collects $9.80, how many cups did he sell?

   b. How much money did it cost Andre to make this amount of lemonade?

   c. How much money did Andre make in profit?

(From Unit 5, Lesson 13.)

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