

Unit 6 Lesson 18 Cumulative 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.

- Write an equation that shows the number of coins, n , in terms of the day, d .
- Create a table that shows the number of coins for each day for the first 15 days.
- 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.

- If Andre collects \$9.80, how many cups did he sell?
- How much money did it cost Andre to make this amount of lemonade?
- How much money did Andre make in profit?

(From Unit 5, Lesson 13.)