Lesson 8 Practice Problems

1. At the book sale, all books cost less than $5.

    a. What is the most expensive a book could be?

    b. Write an inequality to represent costs of books at the sale.

    c. Draw a number line to represent the inequality.

2. Kiran started his homework *before* 7:00 p.m. and finished his homework *after* 8:00 p.m. Let h represent the number of hours Kiran worked on his homework.

    Decide if each statement it is definitely true, definitely not true, or possibly true. Explain your reasoning.
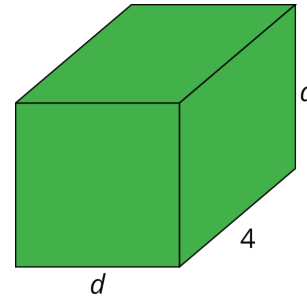
    a. $h > 1$

    b. $h > 2$

    c. $h < 1$

    d. $h < 2$

3. Consider a rectangular prism with length 4 and width and height d.

    a. Find an expression for the volume of the prism in terms of d.

    b. Compute the volume of the prism when $d = 1$, when $d = 2$, and when $d = \frac{1}{2}$.

(From Unit 6, Lesson 14.)

4. Match the statements written in English with the mathematical statements. All of these statements are true.

    A. The number -15 is further away from 0 than the number -12 on the number line.

    B. The number -12 is a distance of 12 units away from 0 on the number line.

    C. The distance between -12 and 0 on the number line is greater than -15.

    D. The numbers 12 and -12 are the same distance away from 0 on the number line.

    E. The number -15 is less than the number -12.

    F. The number 12 is greater than the number -12.

1. $|{-12}| > -15$

2. $-15 < -12$

3. $|{-15}| > |{-12}|$

4. $|{-12}| = 12$

5. $12 > -12$

6. $|12| = |{-12}|$

(From Unit 7, Lesson 7.)

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5. Here are five sums. Use the distributive property to write each sum as a product with two factors.

   a. $2a + 7a$

   b. $5z - 10$

   c. $c - 2cd$

   d. $r + r + r + r$

   e. $2x - \frac{1}{2}$

   (From Unit 6, Lesson 11.)