Lesson 12 Practice Problems

1. a. What is the volume of a cube with a side length of
   i. 4 centimeters?

   ii. $\sqrt[3]{11}$ feet?

   iii. s units?

   b. What is the side length of a cube with a volume of
   i. 1,000 cubic centimeters?

   ii. 23 cubic inches?

   iii. v cubic units?

2. Write an equivalent expression that doesn't use a cube root symbol.

   a. $\sqrt[3]{1}$

   b. $\sqrt[3]{216}$

   c. $\sqrt[3]{8000}$

   d. $\sqrt[3]{\frac{1}{64}}$

   e. $\sqrt[3]{\frac{27}{125}}$

   f. $\sqrt[3]{0.027}$

   g. $\sqrt[3]{0.000125}$

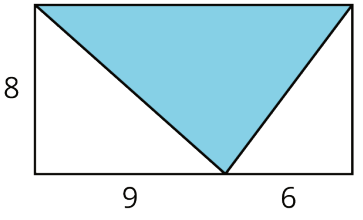
3. Find the distance between each pair of points. If you get stuck, try plotting the points on graph paper.

   a. $X = (5, 0)$ and $Y = (-4, 0)$

   b. $K = (-21, -29)$ and $L = (0, 0)$

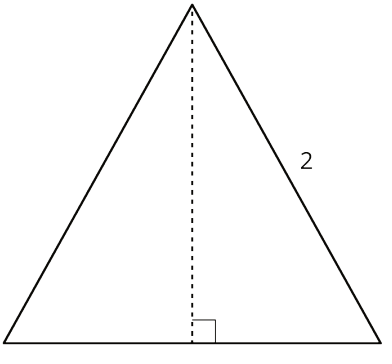
(From Unit 8, Lesson 11.)

4. Here is a 15-by-8 rectangle divided into triangles. Is the shaded triangle a right triangle? Explain or show your reasoning.



(From Unit 8, Lesson 9.)

5. Here is an equilateral triangle. The length of each side is 2 units. A height is drawn. In an equilateral triangle, the height divides the opposite side into two pieces of equal length.



a. Find the exact height.

b. Find the area of the equilateral triangle.

c. (Challenge) Using x for the length of each side in an equilateral triangle, express its area in terms of x.

(From Unit 8, Lesson 10.)