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**Unit 8, Lesson 12****Practice Problems**

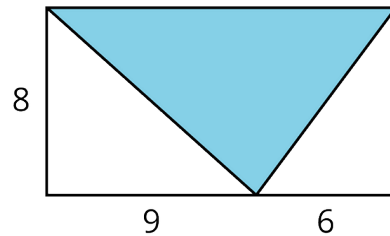
1. a. What is the volume of a cube with a side length of
    - i. 4 centimeters?
    - ii.  $\sqrt[3]{11}$  feet?
    - iii.  $s$  units?
  - b. What is the side length of a cube with a volume of
    - i. 1,000 cubic centimeters?
    - ii. 23 cubic inches?
    - iii.  $v$  cubic units?
- 
2. Write an 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  $L = (0, 0)$

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



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.
- Find the exact height.
  - Find the area of the equilateral triangle.
  - (Challenge) Using  $x$  for the length of each side in an equilateral triangle, express its area in terms of  $x$ .

