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## Curated Practice Problem Set

### Unit 8 Lesson 12 Cumulative 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?
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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.  $\sqrt[3]{0.000125}$

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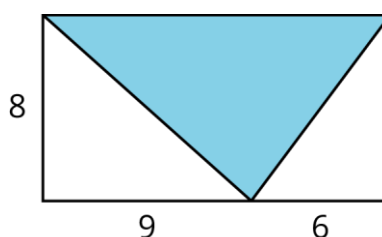
3. Find the distance between each pair of points. If you get stuck, try plotting the points on graph paper.

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.)

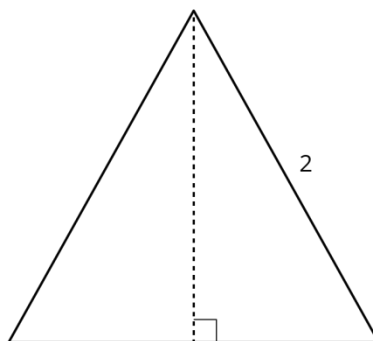
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5. Here is an equilateral triangle. The length of each side is 2 units. A height is drawn. In an equilateral triangle, the height divides the opposite side into two pieces of equal length.



- 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  $x$ .

(From Unit 8, Lesson 10.)

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