NAME   DATE   PERIOD

Unit 8, Lesson 13
Practice Problems

1. Find the positive solution to each equation. If the solution is irrational, write the solution using square root or cube root notation.

   a. $t^3 = 216$

   b. $a^2 = 15$

   c. $m^3 = 8$

   d. $c^3 = 343$

   e. $f^3 = 181$

2. For each cube root, find the two whole numbers that it lies between.

   a. $\sqrt[3]{11}$

   b. $\sqrt[3]{80}$

   c. $\sqrt[3]{120}$

   d. $\sqrt[3]{250}$

3. Order the following values from least to greatest:

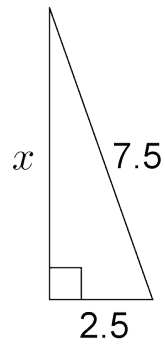$$\sqrt[3]{530}, \ \sqrt{48}, \ \pi, \ \sqrt{121}, \ \sqrt[3]{27}, \ \frac{19}{2}$$

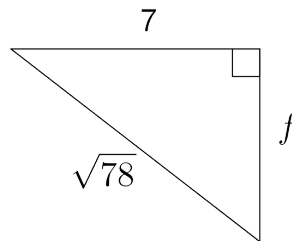4. Find the value of each variable, to the nearest tenth.

a.
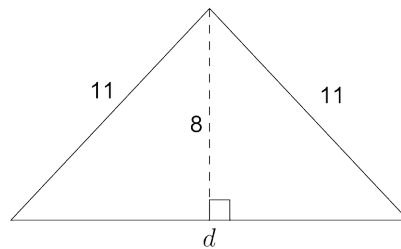
x 7.5

2.5

b.

7

$\sqrt{78}$ f

c.

11   11

8

d

5. A standard city block in Manhattan is a rectangle measuring 80 m by 270 m. A resident wants to get from one corner of a block to the opposite corner of a block that contains a park. She wonders about the difference between cutting across the diagonal through the park compared to going around the park, along the streets. How much shorter would her walk be going through the park? Round your answer to the nearest meter.