Review Worksheet for Lessons 8-1 to 8-4

Simplify the following roots.

1) $9\sqrt{49}$

2) $\sqrt{\frac{81}{36}}$

3) $\sqrt{112}$

4) $21\sqrt{92}$

5) $\sqrt{\frac{11}{7}}$

6) $\frac{56}{\sqrt{12}}$

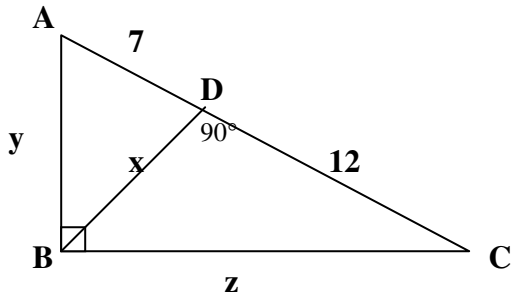
Find the geometric mean between the two numbers (keep your answer in simplified root form).

7) 2 and 8

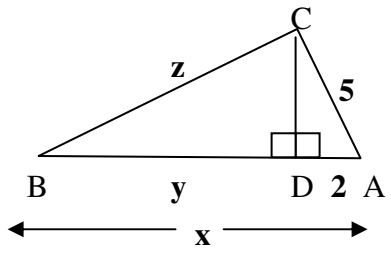
8) 3 and 24

For each diagram, find the values of x, y, and z (your answers can be in decimal form rounded to the nearest hundredth).

9)



10) Given that < C = 90°



Use the Pythagorean Theorem to complete the table.

	11)	12)	13)	14)	15)	16)	17)
a	6	8		5	5x	$\sqrt{5}$	$2\sqrt{3}$
b	8		24		12x		
c		17	25	10		7	8

18) You want to clean the gutters on your house. Your gutters are 30 feet off the ground and you need to keep the ladder 12 feet from your house so it will rest on your sidewalk. Your ladder extends to 35 feet long, will it be long enough for you to be able to clean the gutters?

Tell whether the triangle with the given lengths is acute, right, or obtuse. If a triangle can not be formed, write not possible.

19) 2, 5, 6

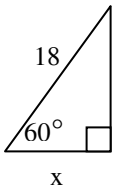
20) 7, 12, 13

21) 2, 7, 9

22) 1, $\sqrt{7}$, $2\sqrt{2}$

Find the value of x.

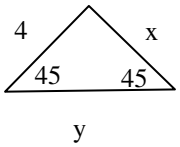
23)



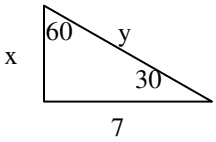
24) Given a square with a perimeter of 16, find the length of the diagonal.

Solve for x and y.

25)



26)



27) The altitude of an equilateral triangle has length $9\sqrt{3}$. What is the perimeter of the triangle?

Answer Key:

1) 63
2) $\frac{3}{2}$
3) $4\sqrt{7}$
4) $42\sqrt{23}$
5) $\frac{\sqrt{77}}{7}$
6) $\frac{28\sqrt{3}}{3}$
7) 4
8) $6\sqrt{2}$
9) x = 9.17, y = 11.53, z = 15.1
10) x = 12.5, y = 10.5, z = 11.46
11) 10
12) 15
13) 7
14) $5\sqrt{3}$
15) 13x
16) $2\sqrt{11}$
17) $2\sqrt{13}$
18) yes; you need at least 32.31 feet of ladder
19) obtuse
20) acute
21) not a Δ
22) right
23) 9
24) $4\sqrt{2}$
25) x = 4 y = $4\sqrt{2}$
26) x = $\frac{7\sqrt{3}}{3}$ y = $\frac{14\sqrt{3}}{3}$
27) 54