

Name \_\_\_\_\_

**Algebra I Chapter 10 Practice Test**

**Simplify.**

1.  $\sqrt{125}$

2.  $\sqrt{108}$

3.  $\sqrt{5} \cdot \sqrt{15}$

4.  $\sqrt{500x^7y^{10}}$

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

6.  $\sqrt{75} + 8\sqrt{3} - 11\sqrt{3}$

7.  $\sqrt{18} + \sqrt{12} + \sqrt{50}$

8.  $2\sqrt{50} - 3\sqrt{32}$

9.  $6\sqrt{27} + 8\sqrt{12} + 2\sqrt{75}$

10.  $\sqrt{6}(\sqrt{10} - \sqrt{3})$

**Solve each equation. Check your solution.**

11.  $\sqrt{x} = 11$

12.  $\sqrt{3y} - 8 = 22$

13.  $\sqrt{5x-5} = 5$

14.  $\sqrt{\frac{x}{7}} = 8$

15.  $\sqrt{28-3x} = -2$

16.  $\sqrt{6x-8} = 2$

**If c is the measure of the hypotenuse of a right triangle, find each missing measure. If necessary round to the nearest hundredth.**

17.  $a = 16, b = 63, c = ?$

18.  $a = 11, b = ?, c = 61$

19.  $a = ?, b = 9, c = 14$

20.  $a = \sqrt{11}, b = 4, c = ?$

**Determine whether the following side measures form right triangles. Show your work.**

21. 20, 30, 50

22. 4, 7,  $\sqrt{65}$

**Find the distance between each pair of points whose coordinates are given. Express answers as a decimal approximation rounded to the nearest hundredth if necessary.**

23. (12, 3), (-8, 3)

24. (-8, -4), (-3, -8)

25. (2, 7), (10, -5)