Name _____ Date_____

Math 8: Chapter 7 Test Review

Find the square root(s).

1. $-\sqrt{400} =$ _____

2. $\sqrt{2.25} =$ _____

3. $-\sqrt{\frac{36}{16}} =$ _____

4. $\pm\sqrt{\frac{98}{32}} =$ _____

Evaluate the expression.

5. $3\sqrt{81} - \left(\sqrt{40}\right)^2$

$=$ _____

6. $4 - 2\sqrt{\frac{289}{4}}$

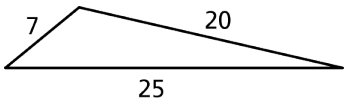
$=$ _____

7. $-2\left(\sqrt{64} - 3\right)$

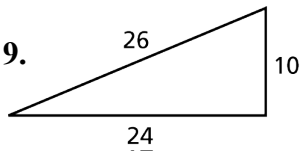
$=$ _____

Prove whether the triangle with the given side lengths is a right triangle.

8.



9.



10. The side of the clip on a clip board appears to be a right triangle. The leg lengths are 2 millimeters and 2.1 millimeters and the hypotenuse is 2.9 millimeters. Is the side of the clip a right triangle?

11. On the Junior League baseball field, you run 60 feet to first base and then 60 feet to second base. You are out at second base and then run directly along the diagonal to home plate. Find the total distance that you ran. Round your answer to the nearest tenth. *(Hint: Draw a picture to help you solve).*

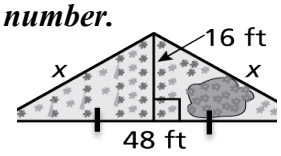
Tell whether a triangle with the given side lengths is a right triangle.

12. $8, \sqrt{54}, 11$

13. $\sqrt{39}, 8, 5$

14. 11 in, 60 in, 61 in

15. You are creating a flower garden in the triangular shape shown. You purchase edging to go around the flower garden. The edging costs \$1.50 per foot. What is the cost of the edging? ***Round your lengths to the nearest whole number.***



Tell whether the rational number is a reasonable approximation of the square root.

16. $\frac{277}{160}, \sqrt{3}$

17. $\frac{590}{160}, \sqrt{17}$

Classify the real number. Choose <u>all</u> that apply from the given list below.
(whole, natural, integer, rational, irrational)

18. $-\sqrt{14}$

19. $1.\overline{3}$

20. 2.375

21. $\sqrt{100}$

Estimate the square root to the nearest (a) integer and (b) tenth.

22. $\sqrt{33}$

integer : _____ 10^{th}: _____

23. $\sqrt{630}$

integer : _____ 10^{th}: _____

24. $-\sqrt{8}$

integer : _____ 10^{th}: _____

25. $\sqrt{\frac{30}{2}}$

integer : _____ 10^{th}: _____

Find the missing value using the Pythagorean Theorem.

26. A swimming pool is in the shape of a right triangle. One leg has a length of 10 feet and one leg has a length of 15 feet. Find the length of the hypotenuse. *(Estimate the length to the nearest integer if necessary).*

27. You and a friend start off standing in the exact same point. Your friend walks a straight line 8 feet North and you walk a straight line 9 feet East. What is the approximate measure of the distance between you if you were to measure the direct route?

28. Find the length of the missing leg of a right triangle.

a. $a = 5$ cm, $b =$ _____, $c = 13$ cm.

b. $a =$ _____, $b = \sqrt{29}$ ft, $c = 15$ ft.