Name: _____ Period: _____ Date: _____

The Pythagorean Theorem Assignment

Use the Pythagorean Theorem to find the length of the missing third side.

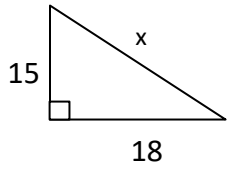
1. $a = 4 \quad b = 6 \quad c = ?$

2. $c = 15 \quad b = 5 \quad a = ?$

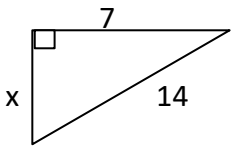
3. $a = 5 \quad c = 14 \quad b = ?$

In the following triangles, find the length of the unknown sides.

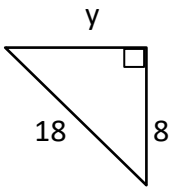
4.



5.



6.



Name: _____ Period: _____ Date: _____

The Pythagorean Theorem Assignment

Determine whether each set of numbers form a Pythagorean triple.

7. $(\mathbf{6}, \mathbf{8}, \mathbf{10})$

8. $(\mathbf{6}, \mathbf{12}, \mathbf{18})$

Determine whether the following side measures form right triangle.

9. $(\mathbf{15}, \mathbf{20}, \mathbf{25})$

10. $(\mathbf{6}, \mathbf{10}, \mathbf{15})$

Find the distance between the point at $(\mathbf{1}, -\mathbf{3})$ and $(-\mathbf{7}, \mathbf{8})$.

11. (x_1, y_1) (x_2, y_2) $d = ?$
$(\mathbf{1}, -\mathbf{3})$ $(-\mathbf{7}, \mathbf{8})$

Find the distance between the point at $(\mathbf{3}, \mathbf{4})$ and $(\mathbf{6}, \mathbf{8})$.

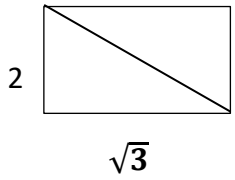
12. (x_1, y_1) (x_2, y_2) $d = ?$
$(\mathbf{3}, \mathbf{4})$ $(\mathbf{6}, \mathbf{8})$

Name: _____ Period: _____ Date: _____

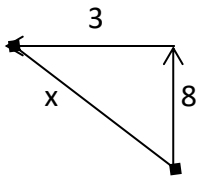
The Pythagorean Theorem Assignment

WORD PROBLEMS

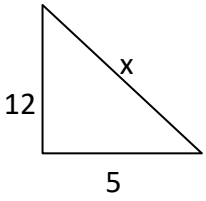
13. A rectangle has a width of 2 and a length $y = \sqrt{3}$. How long is the diagonal of the rectangle?



14. Mary walked 8 miles north and 3 miles west. How far is she from her starting point?



15. There is a building with a 12 ft. high window. You want to use a ladder to go up to the window, and you decide to keep the ladder 5 ft. away from the building to have a good slant.
How long should the ladder be?



16. Sara's TV screen is 20 inches long. If the diagonal measures 25 inches, how long is the width of Sara's TV?