Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_\_\_

**7.3C Pythagorean Theorem Word Problems\_Classwork**

*Objective: use Pythagorean Theorem to find missing side lengths of right triangles; solve real-life problems CC.8.EE.2/6/7/8*

*HW: 7.3C Homework (handout) – check your answers and show your work*

Additional Notes to Help You Be Successful:

* When you round an answer, you use to say “approximately equal to”
* When you round to the nearest tenth, look at the hundredths digit: if it’s 5 or greater, round up the digit in the tenths place, if it’s 4 or less, tenths’ place digit stays the same.
* There are two abbreviations for feet: ft. and ‘
* There are two abbreviations for inches: in. and “
* An isosceles triangle has 2 congruent sides.

FORMULAS:

Area (rectangle) = b ∙ h Area (triangle) = Area (square) = s2 Perimeter (square) = 4s

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Solve each problem. Draw a picture and use the Pythagorean Theorem to solve. Be sure to label all answers and, when necessary, round to the nearest tenth.

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| 1. A 13’ ladder is placed 5’ away from a wall.  **How far up the wall does the ladder go?** |
| 1. John leaves school to go home. He walks 6 blocks north and then 8 blocks west. How far is John from the school? |
| 1. A softball diamond is a square with sides of 60 feet. What is the shortest distance between first base and third base? |

[**http://www.onlinemathlearning.com/pythagorean-theorem-word-problem.html**](http://www.onlinemathlearning.com/pythagorean-theorem-word-problem.html)

**WARM UP (7.3C)**

1. On Saturdays, I like to run to the park. There are two ways I can get there. From my house, I can run 3 miles north and then turn left and 4 miles west OR I can cut through a parking lot and run diagonally to the park, heading north-west. Which route should I take if I want to run the least? Which route should I take if I want to run the most? Explain how you know.
2. The foot of a ladder is placed 6 feet from a wall. If the top of the ladder rests 8 feet up on the wall, how long is the ladder?
3. What is the length of the diagonal of a 12 cm by 15 cm rectangle? Round to the nearest hundredth.