

PYTHAGOREAN THEOREM PROJECT

Due Date: _____

Directions: Choose one of the following scenarios. Use the space provided on the back of this sheet to sketch your scenario, solve using Pythagorean Theorem, and write a full explanation for your answer. Finally, use a separate sheet of paper to draw and color a model for your solution. Use the rubric as a guide. Your drawings will be displayed in the classroom, so do your best! ☺

Scenario 1: You and your friend enjoy riding your bicycles. Today is a beautiful sunny day, so the two of you are taking a long ride out in the country side. Leaving your home in Sunshine, you ride 6 miles due west to the town of Happyville, where you turn south and ride 8 miles to the town of Crimson. When the sun begins to go down, you decide that it is time to start for home. There is a road that goes directly from Crimson back to Sunshine. If you want to take the shortest route home, do you take this new road, or do you go back the way you came? Justify your decision. How much further would the longer route be than the shorter route? Assume all roads are straight.

Scenario 2: A newly-planted tree needs to be staked with three wires. Each wire is attached to the trunk 3 ft. above the ground, and then anchored to the ground 4 ft. from the base of the tree. How much wire is needed for 6 trees?

Scenario 3: Jill's front door is 42" wide and 84" tall. She purchased a circular table that is 96 inches in diameter. Will the table fit through the front door? Explain using approximations.

Name: _____ Scenario: 1 2 3
(circle one)

	Outstanding (20 points each)	Proficient (15 points each)	Needs Improvement (10 points each)	Incomplete (5 point each)
Explanation	Explanation is clear and well developed.	Explanation is clear.	Some explanation, but several steps are missing.	Little or no explanation is given.
Model	Drawing is done with straight edge, is labeled correctly and has measurements.	Drawing is only a sketch but is labeled and has measurements.	Drawing is only a sketch, is not correctly labeled, but has measurements.	Drawing or sketch has no labels and no measurements.
Solution	Solution is correct. All steps are shown.	Solution is correct, but one or more steps are missing.	Solution is nearly correct.	Solution is partially correct.

Teacher Comments:

Total points: _____/60

Name: _____

Scenario: 1 2 3
(circle one)

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SOLUTION

EXPLANATION