

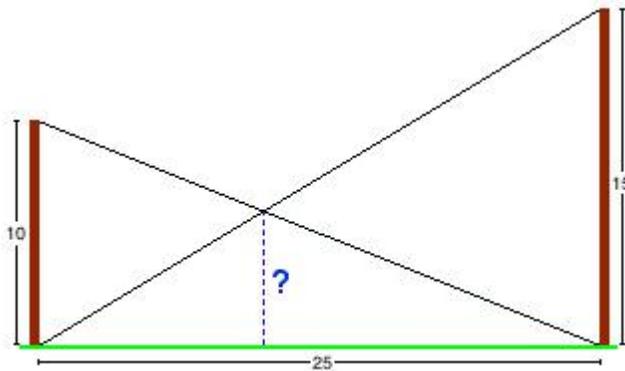
Name: \_\_\_\_\_ Class: \_\_\_\_\_ Due Date: \_\_\_\_\_

When solving the following problem, be sure to:

- 1) Restate the question
- 2) State your answer in a complete sentence (reference the question).
- 3) Explain your solution strategy and include your calculations/work.

### POW Crossed Wires

Two poles, 10 meters and 15 meters high, are 25 meters apart on level ground. A guy wire runs from the top of each pole to the foot of the other pole.



Find the height above ground of the point where the guy wires cross. Using a graph will get you an estimate of an answer, but you will not be able to tell if your answer is the exact value. Therefore, you must solve the problem some other way.

Bonus: What happens to the height where the wires cross if the distance between the poles changes? Use algebraic equations to support your conclusion.

Please answer the problem on a separate piece of paper. You must include all your calculations and an explanation of how you got your answer. Your paper will be scored in the following way:

- 4 The answer and the bonus are correct, you have included all your calculations, and the explanation is thorough and understandable.
- 3 The answer is correct, you have included all your calculations, and the explanation is complete and clear to the reader.
- 2 The answer is missing one of the items mentioned above.
- 1 The answer is incorrect, and the explanation or calculations are poor or missing.
- 0 Minimal or no effort was made to solve the problem.
- All late work is marked down a grade.