

Pythagorean Relationship

Name: _____

1. Now that you have made your own predictions about the relationship between the squares of the lengths of the sides of the right triangle, some of you may have discovered the relationship $a^2 + b^2 = c^2$. To see a proof of this go to <http://www.pbs.org/wgbh/nova/proof/puzzle/theorem.html> and follow the directions to see the relationship.
2. After you have seen and understood the relationship between the squares of the lengths of the shorter sides (legs) and the square of hypotenuse, try the sample problems here: <http://www.pbs.org/wgbh/nova/proof/puzzle/use.html>
3. Once you have tried all the problems, and feel you understand the Pythagorean Relationship, complete the Concept Frame Activity by opening the file in MS Word. Save your results in your space on the server, and print your results to submit to your teacher.
4. After you complete your concept frame and have it checked. Open the dot paper template in MS Paint. Make three connected triangles, and then use the Pythagorean Relationship to calculate the length of the hypotenuse of the largest triangle.
5. Once you have calculated the lengths, draw the triangles separately, with the right angle on the base.
6. Copy and paste your 4 pictures (original triangle and 3 re-drawn triangles) into a Word document and show your calculations there. See sample to see how work is to be presented.
7. Save your information in your space on the server, and print your sheet to be submitted to your teacher for grading.