

The Pythagorean Theorem

What is the relationship between all of the sides of a right triangle?

1. Begin this activity by opening the applet at:

<http://5010.mathed.usu.edu/Fall2020/NSelman/PythagApp.html>

2. After opening the applet, use the blue and orange points to adjust the lengths of the sides of the right triangle. Experiment with it and write down anything you notice.

3. Consider for a moment some things you notice about the sides of a right triangle:

- Are any of the sides always bigger than the other two?
- Is the length of one side dependent on the length of the other two?

4. Now, consider the squares made by the sides of the right triangle:

- Which square is always the biggest?
- What do you notice about the areas of the other two squares in relation to the biggest square?

5. Consider what you have learned and try to answer the question posed at the top of this worksheet:

What is the relationship between all of the sides of a right triangle?