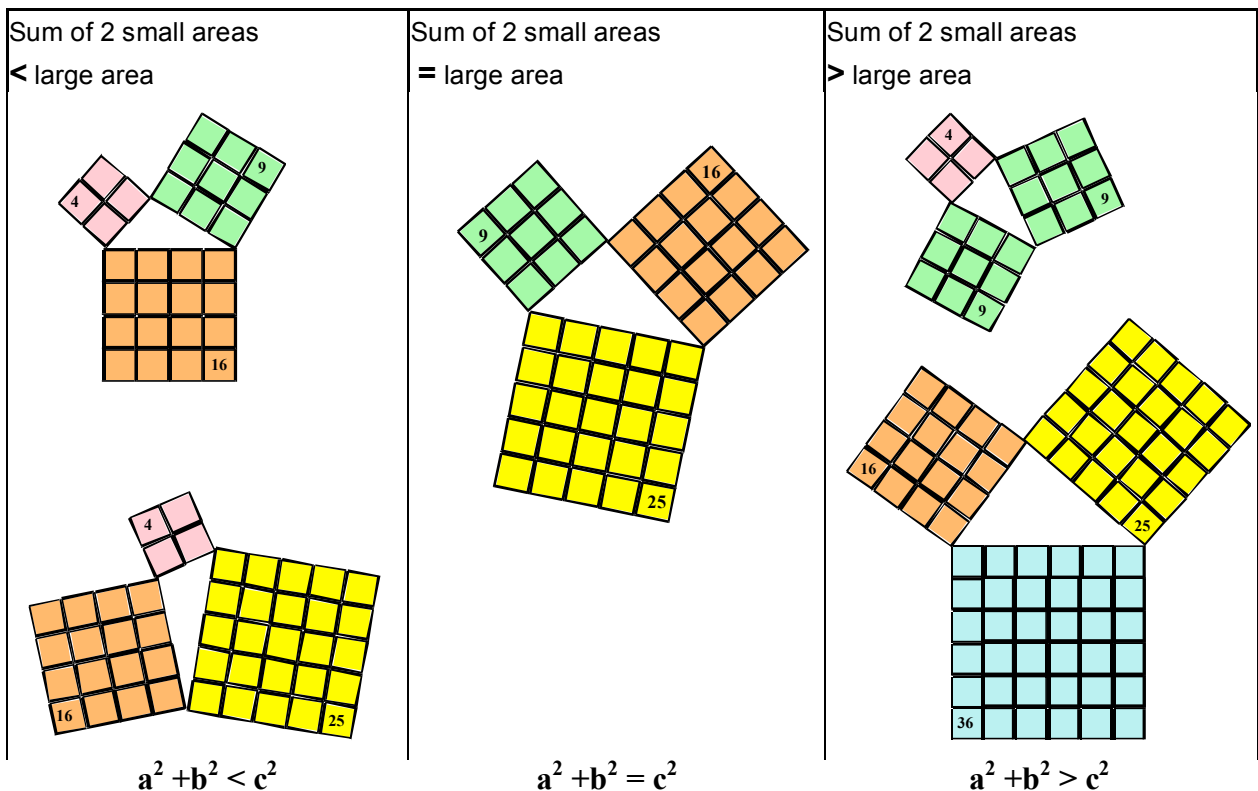


“A²” “C²”-ing is “B²”-lieving Puzzle: Exploring the Pythagorean Theorem

Students cut squares of integer side length 1 to 13 units out of graph paper and arrange them so that the sides of 3 squares form an interior triangle. There will be three large posters in front of the classroom where the students will glue their triangles. Students will group the triangles into the following three categories.

Triangle Areas



After correctly classifying the three different types of triangles, the students will have a better understanding of the differences and similarities of triangles. There will be a class discussion about the relationship of the Pythagorean Theorem and some triangles formed.

Outcomes:

- Students will see that $a^2 + b^2 = c^2$ only holds for **right** triangles
- Students will see that **right** triangles are “special” (more unusual)
- Students will see that $a + b$ must be $> c$ for the triangle to exist.
- Students will see that when $a^2 + b^2 < c^2$ then the triangle will be **obtuse**
- Students will see that when $a^2 + b^2 > c^2$ then the triangle will be **acute**