Pythagorean Theorem proofs:

1. An additive proof (the same pieces add together to make  as can add together to make ).

Following the instructions (see video), cut out and trace/tape your pieces onto this outline, and answer the questions:

Tape your pieces here.

**Looking at how the pieces cover :**

3. How do you know that the pieces exactly fit the side length *c*?

4. How do you know the square space in the middle is exactly the right side for the  square?



Trace how you will cut your pieces here.

**While the pieces cover  :**

1. What is =

2. What is 

2. What does the Pythagorean theorem have to do with area?

3. A subtractive proof (by subtracting the same area from the same area you can get either  or  depending on how you subtract)

Use your right triangle to make two squares, each of whose side length is a+b.

|  |  |
| --- | --- |
| a. In the left square, trace 4 triangles, so that what’s left is a square with side length *c*.  Shade in the square with side length *c.* | b. In the right square, trace 4 triangles so that what’s left is two squares: one with side length *a* and the other with side length *b*.  Shade in the two squares. |

In class practice:



Shapes to cut (use to do #1, 3):



