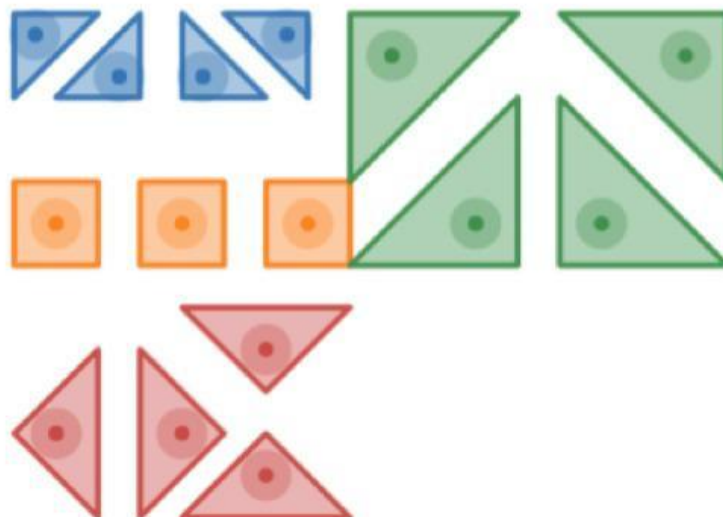Decompose and Compose to Find the Area

1) This interactive graph has some squares and some small, medium, and large right triangles.
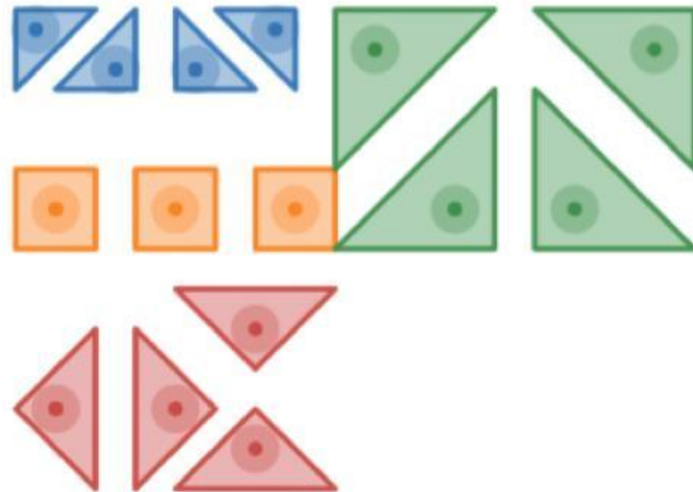
   Click on a shape and drag to move it.

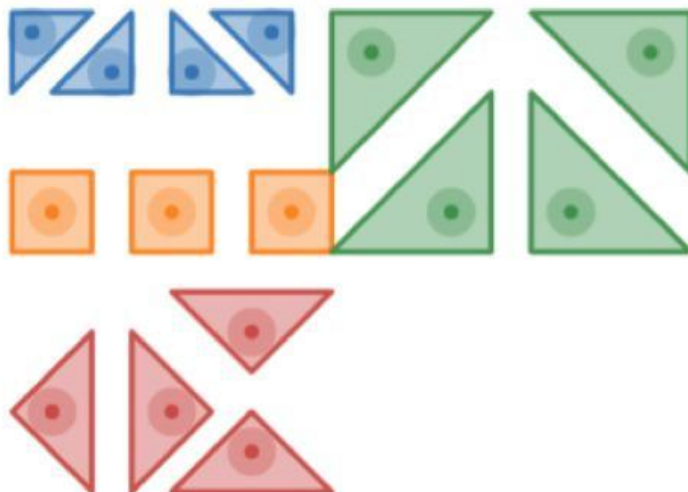   The area of each square is 1 square unit.

   Notice that you can put together two small triangles to make a square. What is the AREA, in square units, of the square composed of two small triangles?
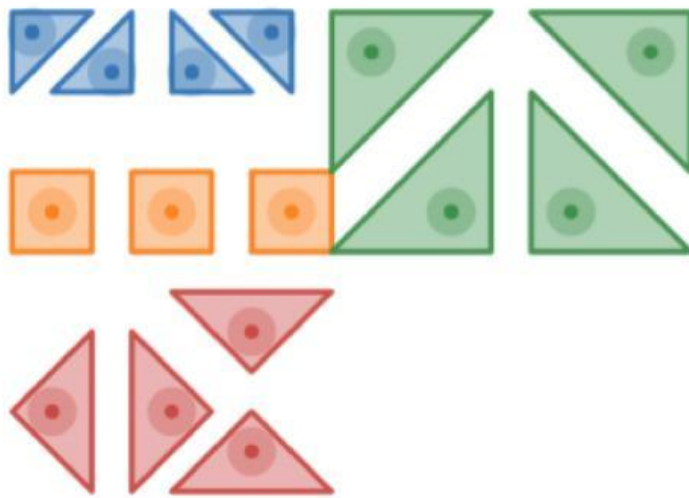
2) Use your shapes to create a NEW shape with an area of 1 square unit that is NOT a square. Explain how you know the area is 1 square unit.
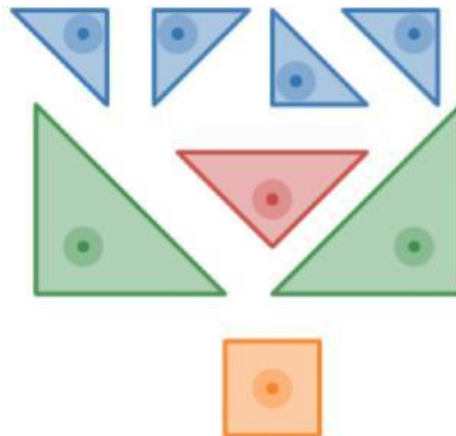
3) Use your shapes to create a new shape with an area of 2 square units. Explain how you know the area is 2 square units.
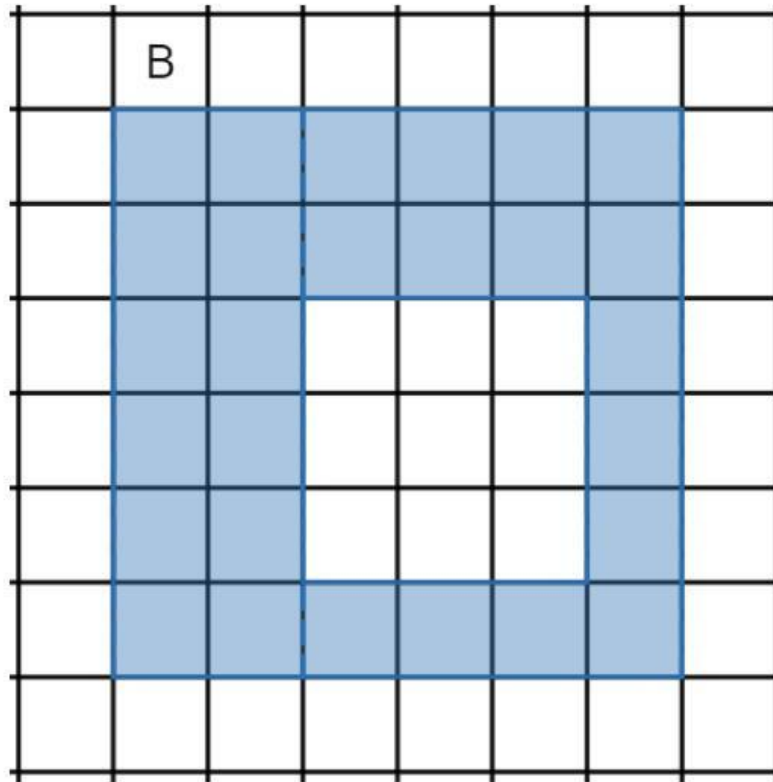
4) Use your shapes to create a DIFFERENT shape with an area of 2 square units. Explain how you know the area is 2 square units.
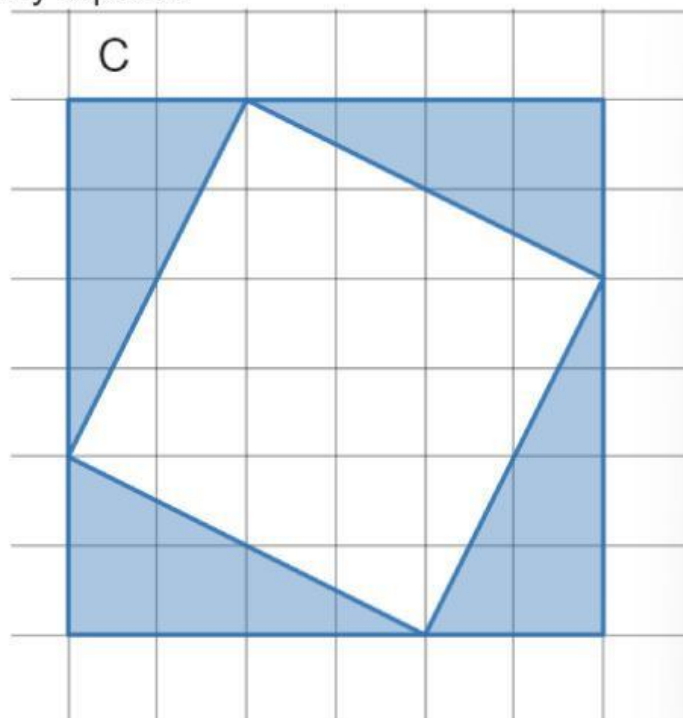
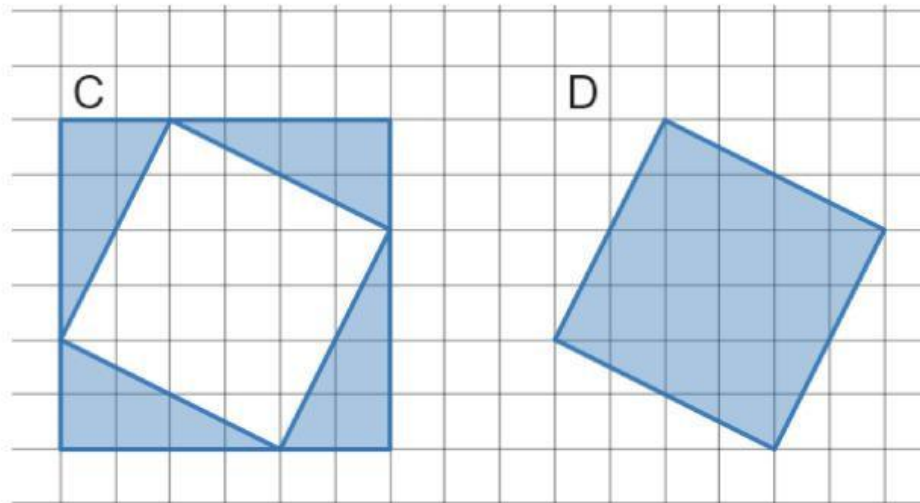5) Find a way to use all of these pieces to compose a single large square. What is the area of this large square?

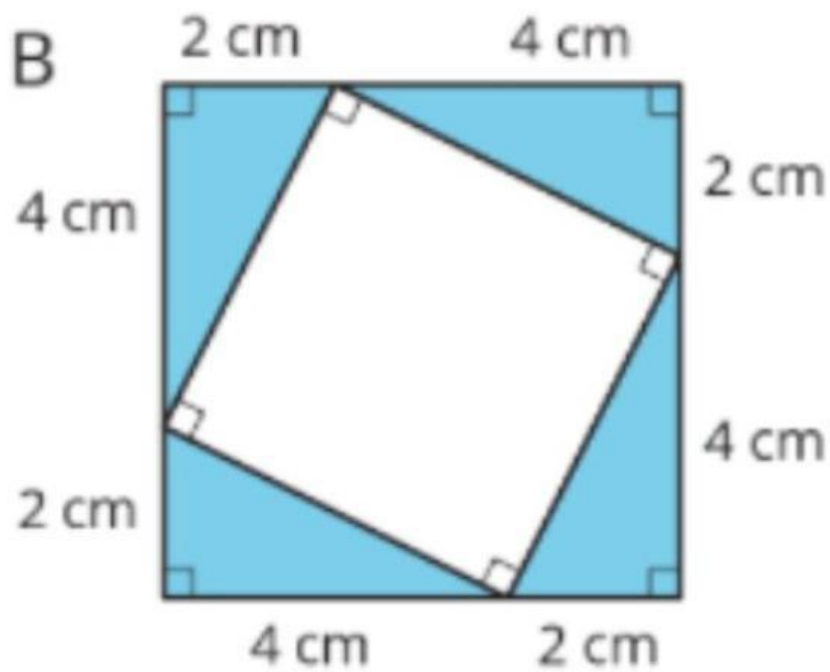6) Find the area, in square units, of each shaded region without counting every square.

B

7) Find the area, in square units, of each shaded region without counting every square.

C

8) How do the areas of shape C and shape D compare?

9) Find the area of the shaded region(s) of each figure.

10)