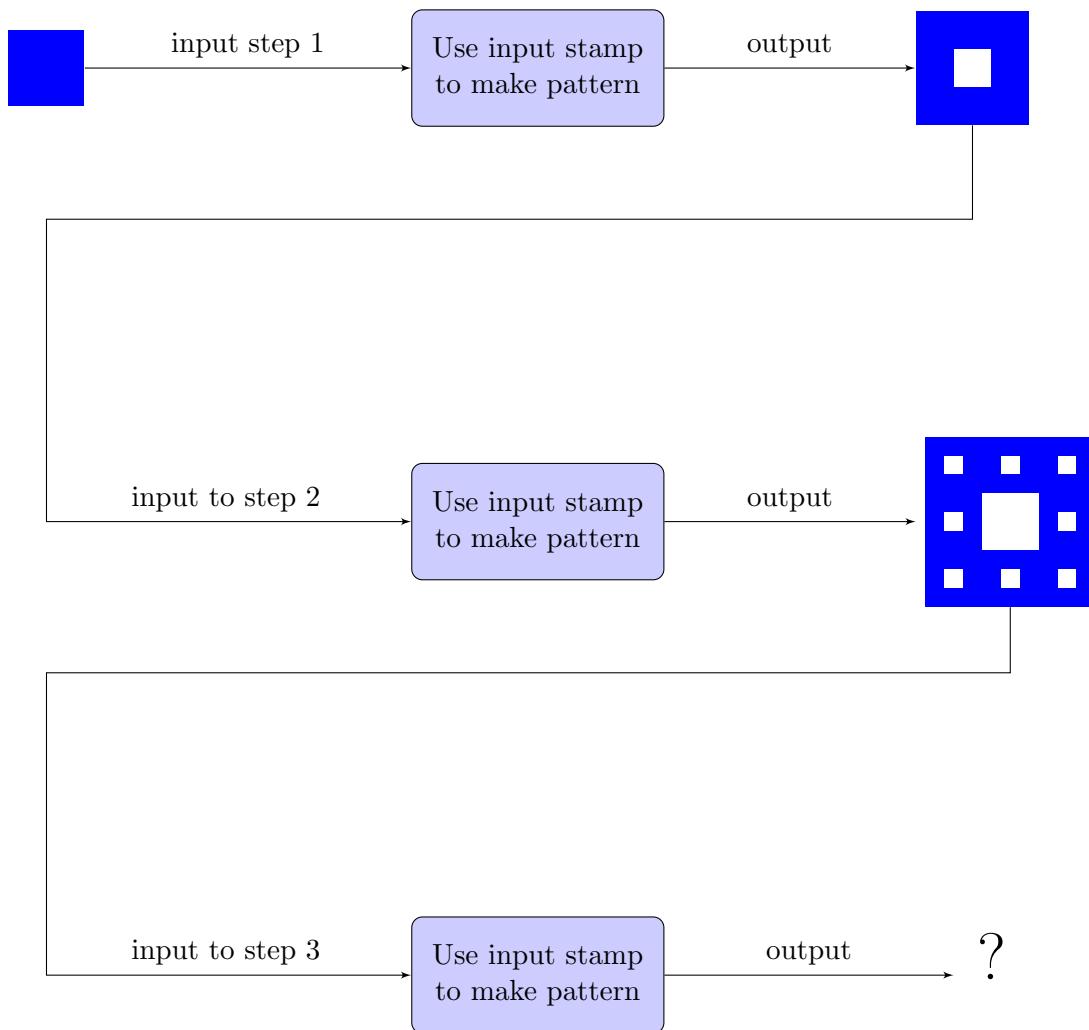


This is a “paper and pencil” activity where you fill in squares on grids that are provided in this document. The overview of the algorithm is shown below, and consists of three steps. The input to each step is a *stamp* having a particular *shape*. The *stamp shape* used in step 1 is a square. The stamp shape used in step 2 has a shape like the letter-O.

In general, the stamp shape that is input to a given step is the stamp shape used to create the pattern for that step. The pattern that is created then becomes the *stamp shape* that is the input stamp shape used for the next step in the algorithm. A diagram of the algorithm is shown below.



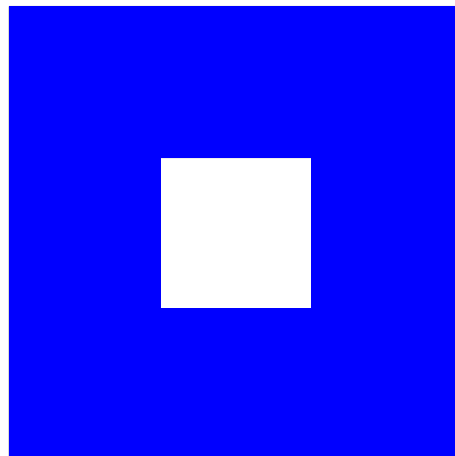
## Step 1

Matrix size	=	3x3
Stamp shape	=	

Place the stamp shape (i.e., in this case a square) in each of the cells containing the words *stamp here*.

stamp here	stamp here	stamp here
stamp here		stamp here
stamp here	stamp here	stamp here

The result is the following shape, which will be the *stamp shape* that is the output of step 1. This shape will be the stamp shape that is input to step 2.



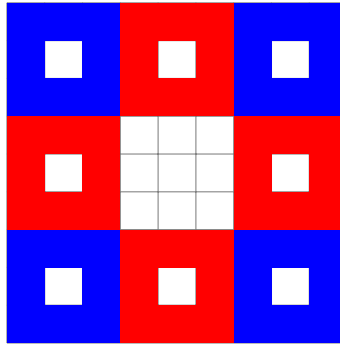
## Step 2

Matrix size = 9x9

Stamp shape =



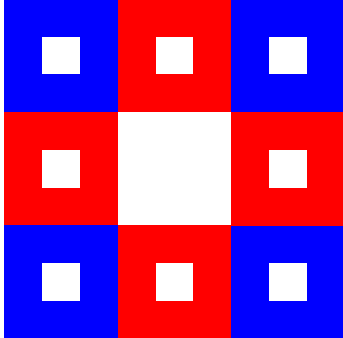
The result of placing the stamp shape in our letter-O pattern is the following shape, which is the *stamp shape* that is the output of step 2. This shape will be the stamp shape that is input to step 3. Note if you use more than one color it becomes easier to keep track of the pattern you are drawing.



### Step 3

Matrix size = 27x27

Stamp shape =



Can you fill in the rest to produce the *stamp shape* that is the output of step 3? Hint: It can be very helpful to use more than one color.

