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 cross-like shape.

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


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



The result of placing the stamp shape in our cross 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


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.


