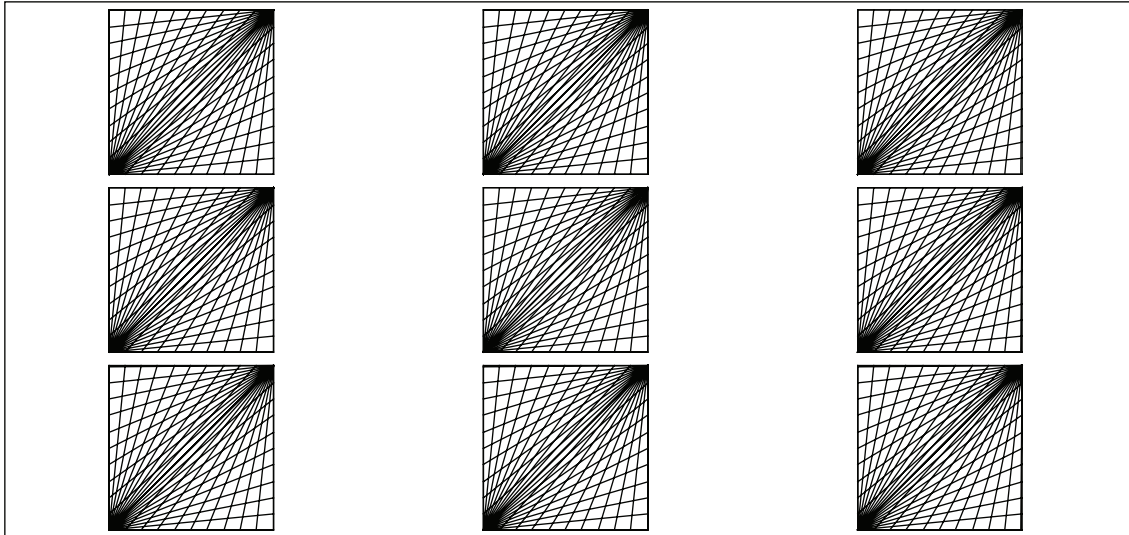
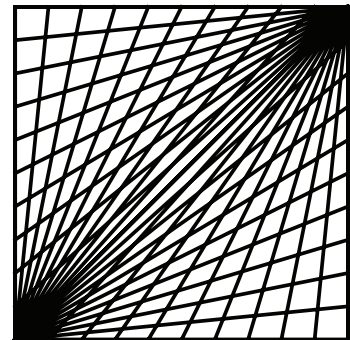


Requirement Write a JAVA Applet that draws similar to the following applet. Check the site for a live demonstration.



1. The applet draws an $N \times N$ repetition of the same base figure, where $N=3$.
2. Each base figure must be sized as a square, but the size and position varies depending on the size of the applet.
3. The $N \times N$ figures must be distributed evenly both horizontally and vertically. Note that the distance between any of the applet edges and the figure is half the distance between the figures.
4. The minimum distance between the figures is 10 pixels. The minimum distance between the figures and the edges is 5 pixels.
5. The base figure, which is enlarged on the right, is drawn using straight lines only. There are S lines distributed evenly, where $S=10$.
6. Your program should refer to N and S as constants. In a subsequent assignment, we will be varying these values, so you better treat them as variables rather than literally.
7. Your HTML file should specify the width and height of the applet to 100% as seen here:



```
<APPLET CODE="..." WIDTH="100%" HEIGHT="100%"></APPLET>
```

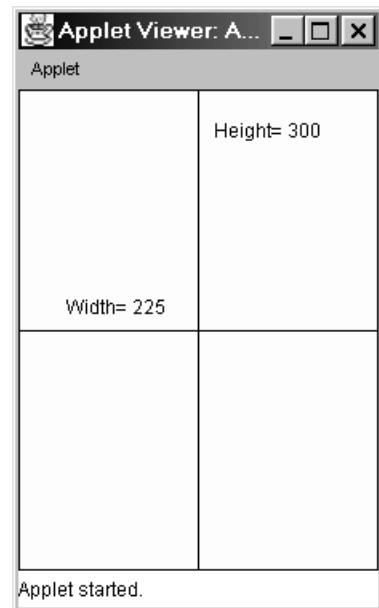
The applet should redraw itself and adapts properly to any change in the size of its containing window.

Background Material

Study the following JAVA Applet:

```
1  import java.applet.* ;
2  import java.awt.* ;

3  public class AppSize extends Applet {
4      public void paint(Graphics g) {
5          int w = getSize().width ;
6          int h = getSize().height ;
7          g.drawLine(0,h/2,w,h/2) ;
8          g.drawLine(w/2,0,w/2,h) ;
9          g.drawString("Height= "+h,w/2+10,30) ;
10         g.drawString("Width= "+w,30,h/2-10) ;
11     }
12 }
```



The applet draws two lines: one horizontal (line 7) and the other vertical (line 8) at the center point of the graphic space (whose size is specified in the HTML file). Notice how the Applet determines (at run time) the width of its graphic space on line 5 and the height on line 6. Your program should do the same. **Don't hard-wire these values in your program.**

Notice also how the program draws the lines using the method `drawLine` which is part of the `Graphics` object `g` that is passed to the Applet's `paint` method.

`drawLine(x1,y1,x2,y2)` takes four integer arguments: The first two are the x-y coordinates for the starting point and the last two are the coordinates for the ending point. Note that In JAVA applets, the x-axis goes from left to right while the y-axis goes from top to bottom as you see in the following figure:

