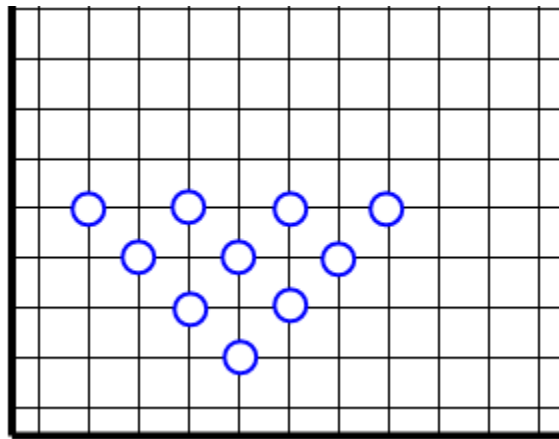


## Programming Exercise 7A

**NOTE:** All programs that you write must have comments at the top with 1) the program name, 2) your name, and 3) a sentence describing what the program does.

- 1) Create a program called **Lab7A1** that will use the Turtle graphics tool to create a picture.
  - Write a program that will use at least 3 different types of shapes (circles, triangles, hexagons, octagons, squares, etc.) together to make a picture. It could be a picture of a snowman, trees, house, car, etc.
  - It must be your original picture and not look like anyone else's.
  - The picture should have at least 9 different shapes (of at least 3 different types) to create your picture and should be at least 500 x 500 pixels in size.
- 2) Our turtle is working as a pin setter in a bowling alley and needs to set up the pins (which are actually dots) in the pattern shown below. Write a program named **Lab7A2** that will make the turtle move around the window and draw size 20 dots.
  - Obviously, we do not have a grid on our window, but the lines are there in the example picture to show you how far apart the pins should be.
  - The distance between lines is 50 pixels.
  - Have your turtle move around and draw dots in the spaces shown. You can choose where he starts and ends, but he should move away from all the "bowling pins" (dots) when he has finished.
  - The turtle should not draw any lines.
  - The dots will probably be filled in, but that is fine.



- 3) For this next program you will create a method that can be used multiple times to create a pattern. Write a program named **Lab7A3** that will make the turtle move around the window and draw size 20 dots in the pattern shown below.
  - You will do something like the last program, but for this one, you need to make a method that will draw one row of the dots.

- In the main method, position the turtle under the first spot in a row (as shown by the black arrow below) and then call the method. The method should move and draw all the dots in one row.
- Then position the turtle beneath the next row and call the method again. Repeat this until you have all 4 rows.
- The turtle should not draw any lines.
- DO NOT use the goto command inside your method. You can use in main it to position your turtle before calling the method each time if you want.

