Unit 5: Graphics

In Unit 5 you learned how to build graphics-based programs.

Objectives:

- Try these additional tasks to practice what you learned in Unit 5.

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1. Draw 100 random circles on the screen in random colors. A random circle has a random center and a random radius. Use randInt(a,b) (on the [math] PROB menu) to select a random number from a to b. For random colors you could use randInt(10,24)→C but the last 5 colors are just shades of gray. To avoid them use randInt(10,19)→C. Then use Circle(X,Y,R,C) where X, Y, R and C are also assigned random numbers appropriate for your window. Remember to turn axes off, functions off, plots off , etc. Note that colors are in the numeric range 10..24.
2. Use **getKey** in a **While** loop to continue drawing random circles until a key is pressed:

   While getKey=0

   (your code here)

   End

   How long will it take cover the screen with color?
3. Change the random circles program to draw random lines. Again, be aware of your window.
4. Unlike the geometric shapes like Line and Circle, [draw]>Text uses *pixel* coordinates (line#, col#) rather than window coordinates. Pixel coordinates start with (0,0) in the upper left corner and advance down (lines) and to the right (columns). The first value is the *line number* and the second is the *column number* of the starting point of the text and the third parameter is the text or variable to draw. Text color is set using the TextColor command also found on [draw]:

   TextColor(BLUE) (use [prgm] COLOR to get a color or use a number from 10 to 24)

   Text(10,10,"HELLO")

   Write a program to draw your name at random locations on the screen with random colors. Remember that the colors are numbered from 10 to 24 so you can use **randint(10,24)→C** to select a random color and then use **TextColor(C)**.
5. Write a program to make your name scroll up the graph screen like movie credits using the Text statement on the [draw] menu. It can start below the bottom of the screen and move upward off the top of the screen and then start over. Stop the program with a keypress using **While getKey=0**.