# Scratch logo and symbol, meaning, history, PNG

**Pen Drawing**

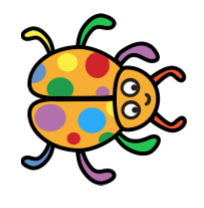
Register/login at <https://scratch.mit.edu>

Remember to write down your password.

Icon

Description automatically generated*In this project we look at the* ***Pen extension****. This allows a sprite to leave a trail when it moves.*

1. Graphical user interface

   Description automatically generated with medium confidenceClick on the **Add Extension** button at the bottom left of the screen.
2. Select the **Pen** extension. New **Pen** code blocks appear below the other code blocks.
3. Choose a sprite that looks good when rotated. I chose LadyBug1.
4. Add a **When** **FLAG** **clicked** code block, to run the program.
5. A picture containing text, sign, screenshot

   Description automatically generatedFrom the new pen code blocks add **pen down** to start drawing. Add **move 100 steps** to draw a line.

*To draw a shape like a square,   
turn the sprite at the corners.*

1. Add **turn ⟳ 90 degrees**,   
   then **move 100 steps** again.
2. *Diagram, shape

   Description automatically generated*Copy (right click the block, then **duplicate**) the turns and moves to draw a square.
3. *Graphical user interface

   Description automatically generated*You can erase the drawing with the **erase all** block. You can trigger this on a key being pressed.

A screenshot of a phone

Description automatically generated with low confidence*There's a lot of duplication in the square drawing code. Replace this with a loop that repeats four times.*

1. Add a **repeat** block and change the loop count to 4 for each of the four sides.   
   Place **move** and **turn** inside the loop.

*Diagram

Description automatically generatedHow can you draw a triangle? It has three sides so you have to change the loop count*.

*The turn angle is 360 divided by the number of sides. Work out 360 / 3 (the ‘/’ is division).*

1. Change the loop count and the turn angle to draw a triangle. What about shapes with *more* than 4 sides?

*The external angles of any polygon add up to 360 degrees.*

*Remember to* ***Save*** *your code with a good name.****File > Save now***