

LINE



This example shows you how to draw a line of 24 mm (~1 inch) length



← The first three blocks put the cursor back to the (0,0) position, set the direction and clear the stage.

← "Repeat" repeats the blocks inside a certain number of times.

← "Move 10 steps" to define the length of a single stitch.

The number of steps determines the size of the individual stitch.
10 steps = 2 mm stitch
20 steps = 4 mm stitch

Feel free to experiment!

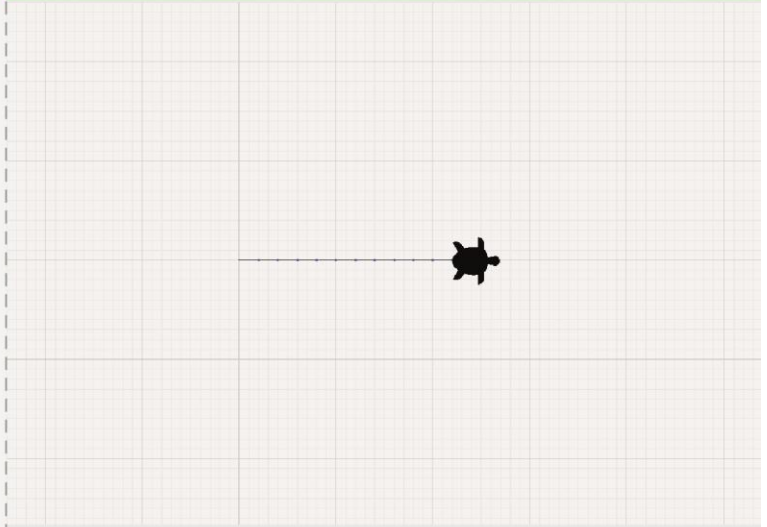
Username: jlin2017



LINE



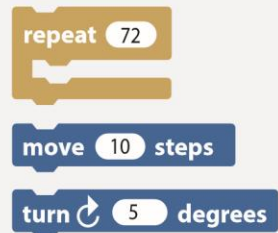
Now we will stitch a line.
Follow the steps and try to make your own copy of the code!



CIRCLE



Blocks Needed:

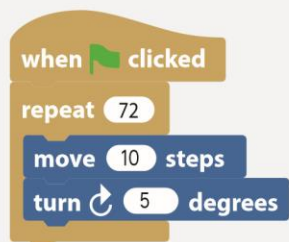


← The block "Repeat" repeats the blocks inside 72 times.

← This block directs the turtle to move forward, making a stitch.

← This block turns the turtle clockwise, the specified number of degrees.

Put the blocks together, run the code, and we just stitched a circle!



For a smaller circle decrease the number of repeats and set turn to $360 / (\text{number of repeats})$.

Ex: set repeat to 36 and set turn to 10 degrees.

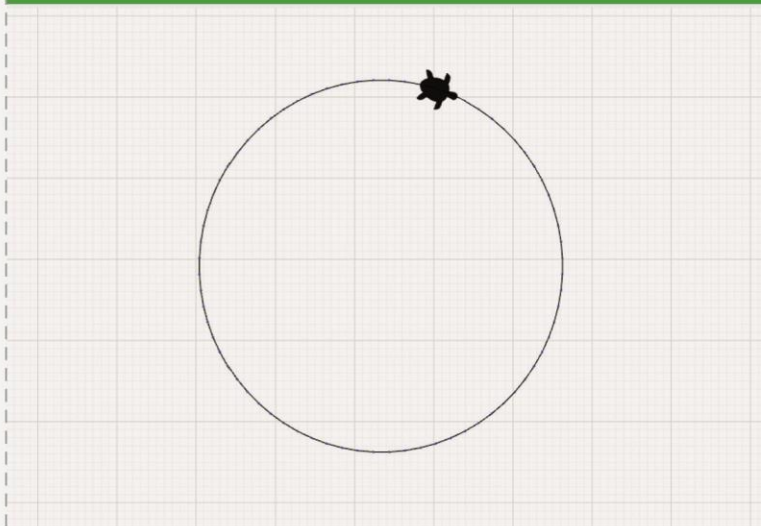
Username: jlin2017



CIRCLE



Let's stitch a circle now.
Follow the steps and try to make your own copy of the code!



SQUARE

Blocks Needed:

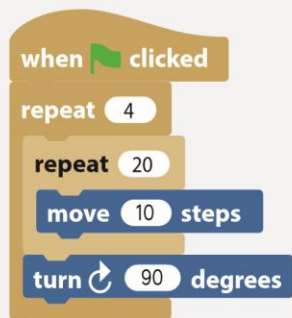


← "Repeat" repeats the blocks inside a certain number of times.

← "Move" moves the turtle forward a certain number of steps.

← "Turn" turns the turtle a certain number of degrees in the direction of the arrow.

Put the blocks together, run the code, and we just stitched a square!



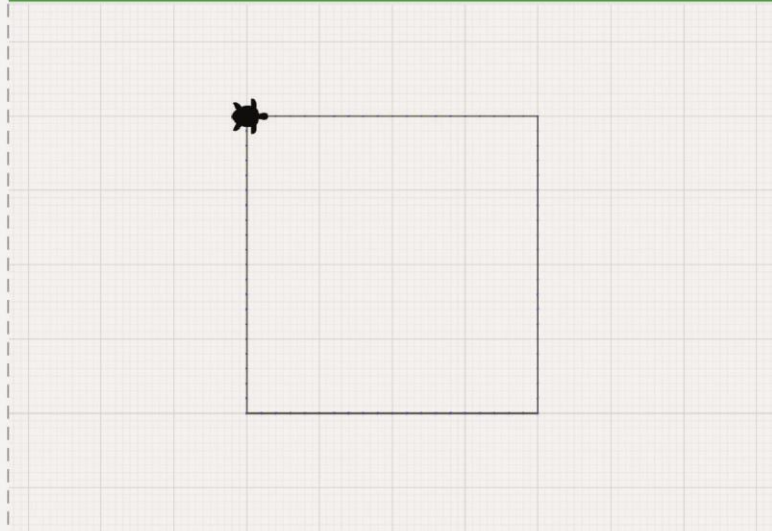
Username: jlin2017



SQUARE



Now, we will stitch a square. Follow the steps and try to make your own copy of the code!



PINWHEEL

Blocks Needed:



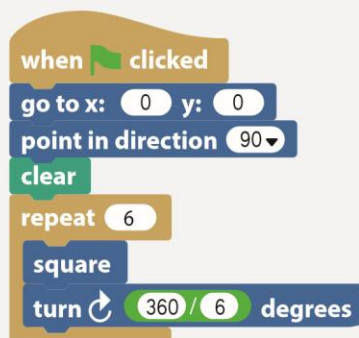
← "Repeat" repeats the blocks inside a certain number of times.

← Insert a block to make the squares. Refer to cards "Block" and "Square".

← "Turn" turns the turtle a certain number of degrees in the direction of the arrow.

← This operator block divides inputs.

Put the blocks together, run the code, and we just stitched a pinwheel!



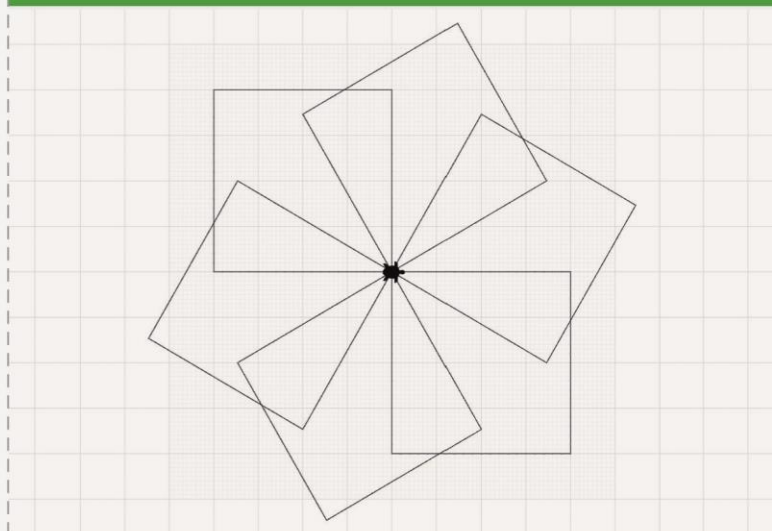
Username: jlin2017



PINWHEEL



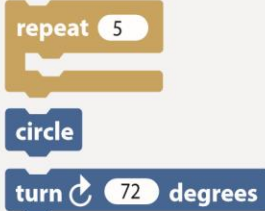
Now, we will stitch a pinwheel from squares. Follow the steps and try to make your own copy of the code!



FLOWER

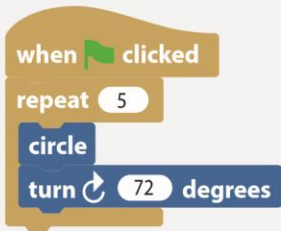


Blocks Needed:



- ← "Repeat" repeats the blocks inside a certain number of times.
- ← Insert a block to make the circle. Refer to cards "Block" and "Circle".
- ← "Turn" turns the turtle a certain number of degrees in the direction of the arrow.

Put the blocks together, run the code, and we just stitched a flower!



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TRIANGLE SPIRAL



Next, arrange your code blocks in the correct order and test your code!
You can experiment by:



- Changing the degrees in the "turn" command by one or two (e.g.: 118 or 121).
- Changing the number of stitches in the Variable you created by a small amount.

Congratulations on making your first Variable!

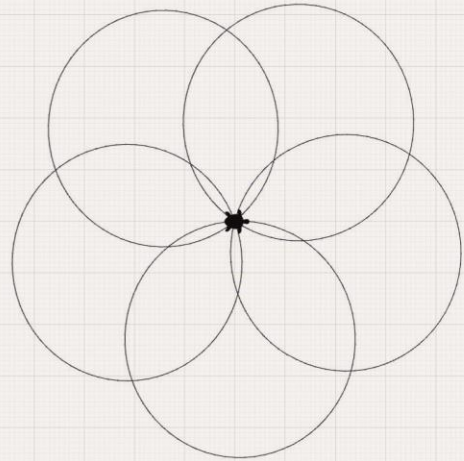
Username: jlin2017



FLOWER



Now, we will stitch a simple flower from circles. Follow the steps and try to make your own copy of the code!



TRIANGLE SPIRAL



In this tutorial, we will stitch a triangle spiral. Starting from the middle, each line of the triangle extends outward by one stitch. By creating this spiral, you'll learn about the powerful concept of Variables!

