

Turtlestitch Investigations: Spin Cycle

How can you make a spiral?

1. These blocks could draw a circle. What number would you need to add to the repeat loop?

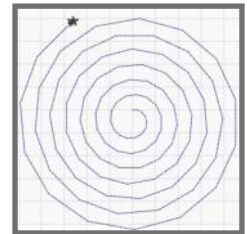
running stitch by 10 steps

repeat

move 1 steps

turn 1 degrees

2. Drawing a spiral is like drawing a circle that keeps getting bigger as you go around. How could you do this?



3. This code is nearly ready to make a spiral. Which block is missing?

reset

running stitch by 10 steps

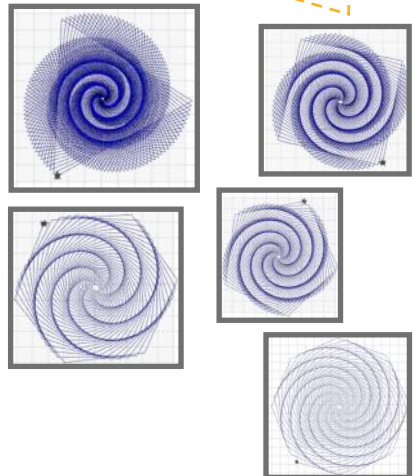
set NumberOfSteps to 10

repeat 100

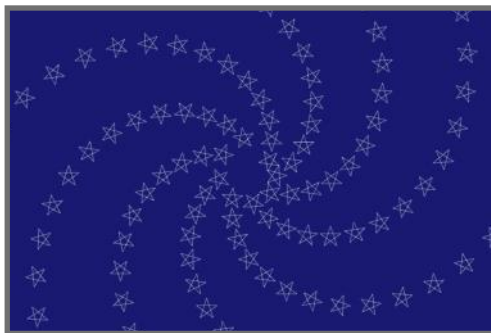
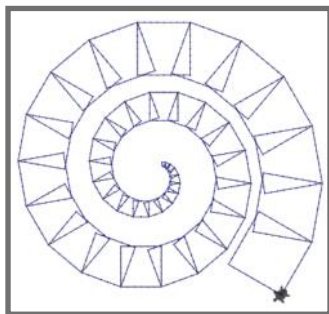
move NumberOfSteps steps

turn 25 degrees

4. Can you create these spirals? The numbers used are 119, 89, 71, 59 and 44.



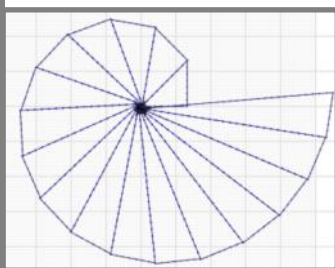
5. Try making spirals with shapes instead of a single line.



Watch the video tutorial on creating spirals like this.

There are many different kinds of spiral to take inspiration from. This is the Spiral of Theodorus.

```
reset
running stitch by 10 steps
set FirstSideLength to 1
set SideLength to FirstSideLength
set Scale to 25
repeat 17
  move 1 steps
  triangle SideLength
  change SideLength by 1
  turn 180 degrees
```



```
Block Editor
triangle SideLength
move Scale * 200% of SideLength steps
turn 90 degrees
move Scale * FirstSideLength steps
turn 90 * 200% of 1 / 200% of SideLength degrees
move Scale * 200% of SideLength + 1 steps
```



Taking it further...

Try making other famous spirals such as the Golden Spiral or these squares based on the Fibonacci sequence.