

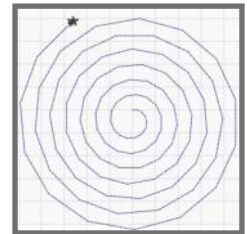
**Turtlestitch Investigations: Spin Cycle**

*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

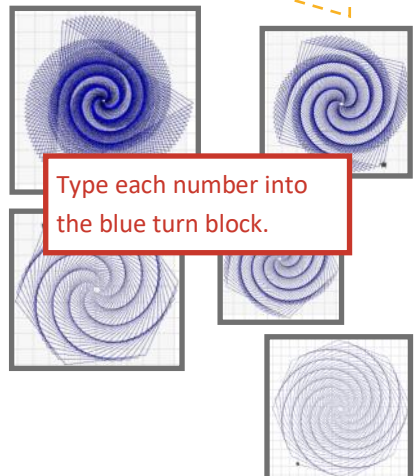
2. Drawing a spiral is like drawing a circle that keeps getting bigger as you go around. How could you do this?



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  
change NumberOfSteps by 1

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

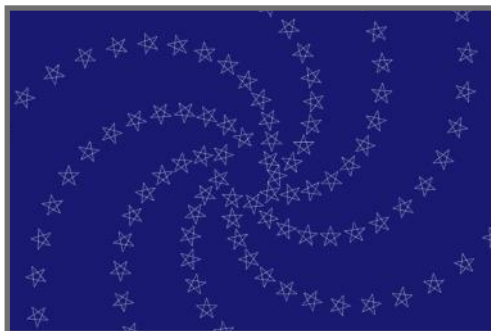


Type each number into the blue turn block.

Add the variable change block. I have set it to change by 1; you can experiment with this.

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

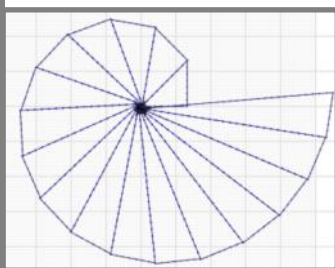
```
reset
running stitch by 10 steps
set LengthOfSide to 5
repeat 43
  MySquare LengthOfSide
  move LengthOfSide steps
  turn 20 degrees
  change LengthOfSide by 2
MySquare LengthOfSide
repeat 4
  move LengthOfSide steps
  turn 90 degrees
```



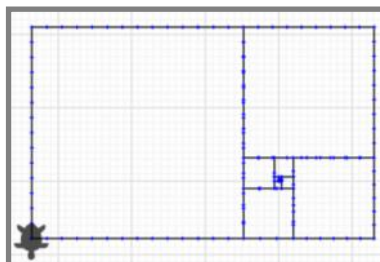
Watch the video tutorial on creating spirals like this.

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.