

# Lesson 2

## Creating Shapes in Scratch

# Checkpoint 1

Q1. What is the perimeter of the shape in your script?

Answer: The perimeter is  $4 * 100 = 400$  units.

Q2. How many degrees does the sprite turn in total?

Answer: It is  $4 * 90 = 360$  degrees.

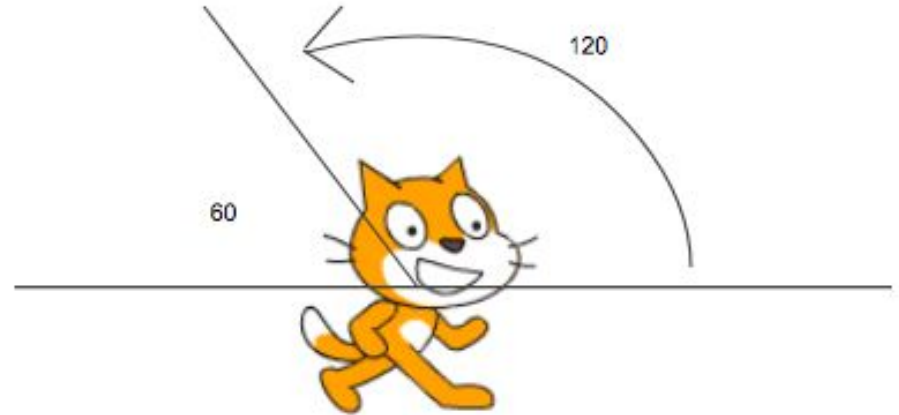
Q3. What number do you need to change to make the shape larger/smaller?

Answer: Instead of “move 100 steps”, if you write 150 steps then the drawing will be larger.

## Checkpoint 2

### What went wrong?

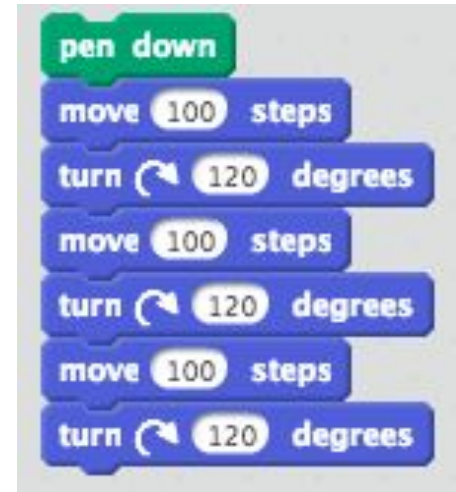
To get a better understanding of what happened, let's look at the angles:



*In order to create the 60 degree interior angle for the triangle, our sprite has to turn the supplementary 120 degrees.*

## Checkpoint 2

- With this new knowledge of Scratch and angles, your new code should look like this:



## Checkpoint 3

Q4. If you've made a script to draw a triangle by turning clockwise 120 degrees at each corner, what will happen if you change the script to turn counter clockwise 120 degrees at each corner?

Answer: The script will draw a triangle in a different orientation.

# Checkpoint 4:

Q5: What happens when you add the “wait” block? How does this help you?



# Checkpoint 4:

Q6: What happens when you add the “clear” block? How does this help you?



## Checkpoint 5:

Explore. How many times will the sprite turn to draw a pentagon and a hexagon. How many degrees will the sprite turn in total?





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