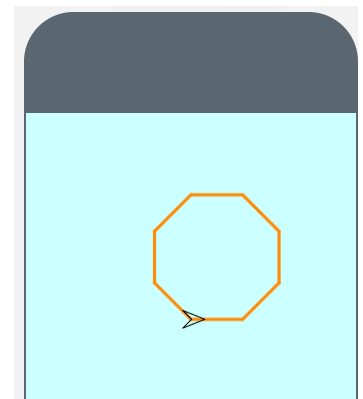


- 1.) Describe at least one benefit of using parameters in writing functions.
- 2.) Describe at least one benefit of using loops.
- 3.) With regards to programming, what are at least two concrete examples of applications of *abstraction*?

- 4.) Write a loop that produces a sketch of a regular octagon.



- 5.) Write a function that uses a modified version of your loop above to produces a sketch of a regular polygon. The function should have parameters that establishes the side length and the number of sides to be drawn.
- 6.) Come up with a specific context (in a sentence) for each of the following:
 - a.) Using a loop over a function.
 - b.) Using a function over a loop.
- 7.) Given the following code, what color would the line most likely end up being?

```
1 penDown();  
2 penRGB(randomNumber(0, 10), randomNumber(0, 10), randomNumber(0, 255));  
3 penWidth(▼40);  
4 moveForward(▼100);
```

Given the following code, answer the following questions:

8. How many arguments are being sent to the function definition in line 5?

9. How many arguments are being sent to the function definition in line 13?

10. What is the control variable of the loop?

11. How is the loop stopping? What is the Boolean Comparison? What is the upper limit of the loop?

12. How is the loop control variable changing?

```
1 hide();
2 penUp();
3 penWidth(3);
4 penColor("#FF8800");
5 moveTo(160, 200);
6 DrawRegShape(8, 50);
7 function DrawRegShape(numSides, sideLength) {
8   moveTo(160 - sideLength / 2, 200 + sideLength / 2);
9   turnTo(90);
10  penDown();
11  for (var i = 0; i < numSides; i++) {
12    moveForward(sideLength);
13    turnLeft(360 / numSides);
14  }
15  penUp();
16 }
```

Given the following code, answer the following questions:

```
1 penDown();
2 penRGB(randomNumber(0, 10), randomNumber(0, 10), randomNumber(0, 255));
3 penWidth(40);
4 moveForward(100);
```

13. How many arguments are being sent to the function definition In line 2?

14. Is there a possibility that white could be drawn from the function call in line 2? Why?

15. Is there a possibility that black could be drawn from the function call in line 2? Why?

16. Write an example of a loop in JS that will never run. (Logic ERROR)

17. Write an example of a loop in JS that will always run. (Infinite Loop)

18. Write 2 examples of a loop in JS that will run exactly 3 times. (Finite Loop)

19. Write an example of a loop in JS that will iterate based on a value in a function call.

20. Why is JavaScript a form of high-level abstraction?