Programming Practice Exercise

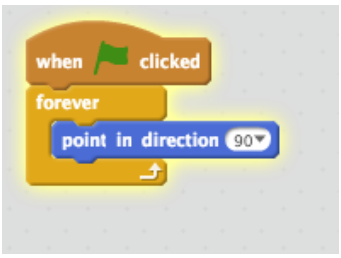
Using http://www.scratch.mit.edu/

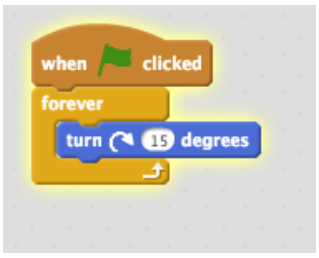
1. If the following statement were executed

Which of the following would be the outcome of the sprite (cat)?

2. Compare the 2 statements posted below and determine whether they are different, if so: describe what each statement would do to the sprite.

For point in direction 90 degrees, it stayed still, but for turn 15 degrees it keeps rotating in a circle.



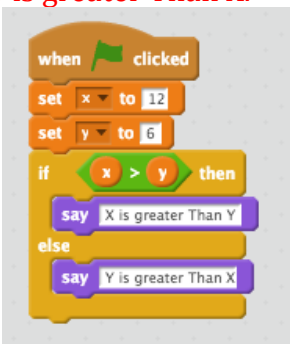


3. Assuming the sprite starts in the middle of the screen (position: 0,0) explain where the sprite (cat) would be at the end of this recursion (loop)

He walks from the origin (0, 0) to the left.

4. Determine the Output of the following

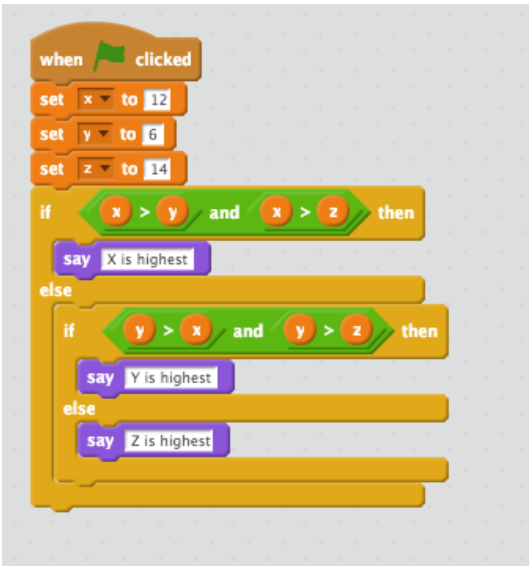
The Cat says Y is greater Than X.



5. Consider the statements below:
   a. Determine the output
   b. What would happen in the case where the variable "z" was also = 12

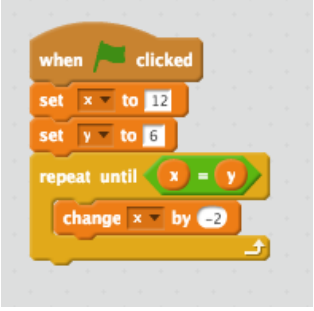
a. It says Z is the highest.

b. It also says Z is the highest.



6. How many times will the following loop occur (until it reaches its desired condition)

Three times the following loop will occur.



7. Consider the Following statements:
    a. Determine the value of x and y
    b. Explain what the statement is trying to accomplish?

a. At first, X was 16 and Y was 19. Later on X and Y are both 19.
b. This statement wants to accomplish making X and Y equal.

8. Consider the Following Statements
    a. Determine the value of of each
    b. Explain the difference between "*repeat*" and "*repeat until*"

a. X=-7 and X=5
b. Repeat is keep doing it in a certain amount of number, but Repeat Until is keep doing it until it reaches a certain condition.

9. You will now write a detailed algorithm (step-by-step instructions) for a sprite (any sprite, could be the cat) to move around the screen "randomly": hint (use the operators) - consider the definition of "random" loosely.