**CS108L Computer Science for All**

**Module 3 Do Now Questions**

1. Question: In this setup procedure the programmer intended to create one turtle of each color: red, green, and blue. What went wrong?

to setup

 clear-all
 create-turtles 1 [ set color [ 255 0 0 ] ]

 create-turtles 2 [ set color [ 0 0 255 ] ]

 create-turtles 3 [ set color [ 0 255 0 ] ]
 end

1. color indexes should be used;
2. too many turtles were created;
3. the turtles are not red, green and blue;
4. no errors are present
5. Question: Given the binary number 1110, what is the result of shifting it 4 times?
6. The result is equal to 4 X 1110 = 4440;
7. The result is equal to 1,110,000;
8. The result is equal to 14 X 4 = 56;
9. The result is equal to 14 X 16 = 224
10. Question: In RGB colors, three bytes are used to represent the amount of each base color. Red, Green, and Blue that goes into making the new color. How many possible unique colors are there using this color scheme?
11. More than 16 million unique colors;
12. 24 unique colors;
13. 8 X 8 X 8 = 512 unique colors;
14. 24 X 24 X 24 unique colors
15. Question: What happens when two infinite go procedures (forever buttons) are executed at the same time after one turtle is created in a setup procedure?

to go1

 ask turtles

 [

 forward 26

 right 155

 ]

end

to go2

 ask turtles

 [

 forward 40

 right 175

 ]

end

1. One turtle executes the go1 procedure and one turtle executes the go2 procedure;
2. One turtle executes only the first go procedure;
3. The go procedures cancel each other out;
4. The turtle executes each go procedure one at a time.
5. Question: Which of the following patterns does this procedure make?

to draw-it

 pen-down

 let myCount 20
 while [ myCount > 0 ]
 [
 forward myCount
 right 90

 set myCount myCount - 2
 ]
 end

1. A 10 sided polygon
2. A 5 sided polygon or pentagon
3. A square spiral
4. A zigzagging line
5. Question: In this procedure the programmer wanted the turtle to draw a tight spiral. What went wrong?

to draw-it

 pen-down

 let myCount 20
 while [ myCount > 0 ]
 [
 forward myCount
 left 60
 ]

 set myCount myCount - 1
 end

1. It drew a loose spiral;
2. It drew a triangle then stopped;
3. It ran on forever without spiraling;
4. Nothing, it drew a tight spiral.
5. Question: In this procedure the programmer wanted the turtle to draw a rosette made up of circles. Instead it made a column of circles. What should be changed to make a rosette?

to draw-it

 pen-down

 repeat 36
 [
 repeat 36

 [

 forward 1

 right 10

 ]
 forward 1
 ]
 end

1. Change the inner “repeat 36” to a “repeat 35”
2. Change the last “forward 1” to a “right 10”;
3. Change the “right 10” to a “right 5”;
4. Either a or b above.