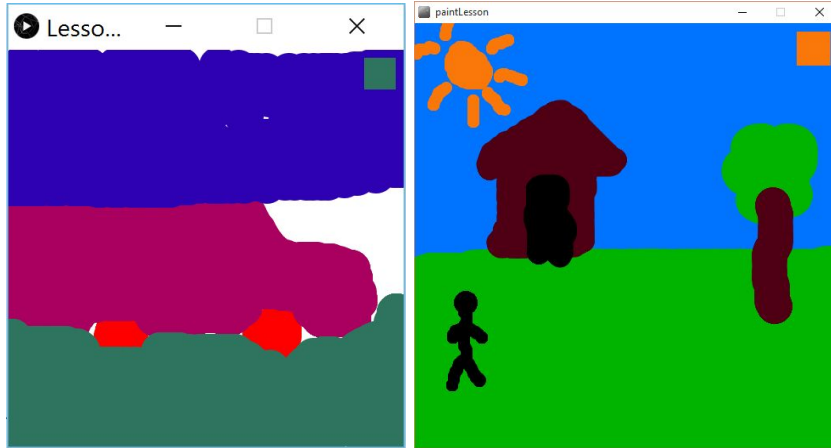# Paint with Functions

In lesson one we made our own version of MS Paint.

In this lesson we are going to add our own **functions**. These are blocks of code which do some special piece of work for us. Imagine that instead of having the write ten ellipse commands for a target you could just call *drawTarget()* and get a target on screen? Now you can!

Task 1: Make a *target* function

A function is code we write once and can use many times within our program. We start by *defining* the function.

```
void drawTarget() {
  ellipse(mouseX, mouseY, 70, 70);
  ellipse(mouseX, mouseY, 60, 60);
  ellipse(mouseX, mouseY, 50, 50);
  ellipse(mouseX, mouseY, 40, 40);
  ellipse(mouseX, mouseY, 30, 30);
  ellipse(mouseX, mouseY, 20, 20);
  ellipse(mouseX, mouseY, 10, 10);
}
```

This code goes outside your other code blocks. It is **not** inside void setup(), void draw(), etc.

Call this code (by using the command "drawTarget();") when the user clicks the mouse.

Once you have that part working, add another condition - you only draw the target if the user is holding down the mouse button *and* they are holding down the 'T' key.

Task 2:

Create new functions for drawing a person, car, house, etc. The user should be able to add these items by pressing a certain key and clicking the mouse.

REMEMBER: the position of every shape in these items must be *relative* to the mouse. For example, ellipse(mouseX + 20, mouseY - 40, 20, 20);