

# CPSC 1045: Worksheet 5, Loops

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1) Why are loops used?

2) Name two types of loops and how are they different?

3) What does the following code do?

```
var num = NaN;
while(isNaN(num) || num < 0){
    var temp = prompt("Please enter a positive number");
    num = number(temp);
}
```

4) For the following for loop fill in the table below and state what it draws?

```
for(var a = 0; a <= 8; a = a + 2)
{
    x = a*10;
    k = a*20;
    ctx.fillRect(x,0, 5,k);
}
```

a	x	k

5) Fill in the table below for the code below and state what it draws.

```
var color;
for(var yIdx = 0; yIdx < 4; yIdx = yIdx + 1){
    for(var xIdx = 0; xIdx < 4; xIdx = xIdx + 1){
        if(xIdx+yIdx % 2 ==0){
            color = "blue";
        } else {
            color = "black";
        }
        var xoffset = xIdx *10;
        var yoffset = yIdx *10;
        ctx.fillStyle = color;
        ctx.fillRect(xoffset,yoffset,10,10);
    }
}
```

xIdx	yIdx	xoffset	yoffset	color

6) What is the value of stringTotal and s1 after the loop executes? How will stringTotal be displayed on a HTML page?

```
s1 = "";
stringTotal = "";
for(var I =0; I < 10; I = I + 1)
{
    s1 = s1 + "*";
    stringTotal = stringTotal + s1 + "<br>";
}
```