Exercise 10: Loops

For this exercise, you'll create some JavaScript functions with for loops. This one uses quite a bit of math. Once we get into arrays, we can do some fun things with loops and strings.

Start with this code

Create a new file in the your text editor and paste in this code. Note that the **body** tag has an attribute called **onload**. This tells the code to call a function when the page loads. We've set it to the **demoLoop** function, which has a for loop in it.

```
<!DOCTYPE HTML>
<html>
<body onload="demoLoop()">


<p id="resultPar"></p>

<script>
function demoLoop() {
    var result = "";
    for (var i = 0; i < 10; i++) {
        result += "<p>" + i + "</p>";
    }
    resultPar.innerHTML = result;
}

</script>

</body>
</html>
```

The **demoLoop** function has a variable called **result**, which starts out as an empty string. Every time in the loop, it adds the value of variable i between two paragraph tags. When the loop is over, there will be 10 paragraph tags, which become the html for the **resultPar** paragraph.

Save this as **loops.html**. Open it in your browser, and you should see the numbers 0 through 9.

Count by twos

Now modify the for loop so that instead of adding one each time, it adds two. Hint: use the += shortcut.

Save and refresh the page. Note that the total number of paragraphs is lower. That is because the conditional is still going to make the loop stop when i < 10.

Count down from 8 to 1

Change the for loop so that i starts at 8 and goes down and stops at 1.

Count down from 9 to 0, by threes

Change the for loop so that i starts at 9 and goes down to 0, counting by threes.

Count power of twos

Change the loop so that i starts at 1, which is 2 to the power of 0. Then each time it loops, it multiplies itself by 2. (Hint: use *= in the increment section) Stop before it gets over 100.

Take a Look at How I've Done It

If you get stuck, you can look at my versions of the code:
http://sdkbridge.com/prog1/Exercise10Answers.pdf.