Lab 05.01 - Solution

1. Write a for loop that makes the following array: [3, 5, 7, 9, 11, 13, 15, 17, 19, 21]

```
let nums1 = [];

for(let i = 3; i <= 21; i+=2) {
    nums1.push(i);
}
console.log(nums1);
```

2. Write a for loop that makes the following array: [100, 80, 60, 40, 20, 0, -20, -40, -60, -80, -100]

```
let nums2 = [];
for(let i = 100; i >= -100; i-=20) {
    nums2.push(i);
}
console.log(nums2);
```

3. Given this array of numbers, use a for loop to add up all the numbers. Save the total to a variable, sum.

```
const nums = [45, 54, 63, 72, 89, 91, 106];
let sum = 0;

for(let i = 0; i < nums.length; i++) {
    sum += nums[i];
}
console.log('sum:', sum);
```

4. Given this array of mixed numbers, 'number-like strings' and fruits, find the sum of the numbers and 'number-like strings'. This requires you to ignore the fruits and to convert the 'number-like strings' to actual numbers. Hint: Think Falsey!

```
let tot = 0;

const mix = ["4", 5, "6", "apple", 7, "8", "kiwi", 9, 10, "plum"];

for(let i = 0; i < mix.length; i++) {
    // if it's convertible into a number to do math with
    let x = Number(mix[i]); // Number("apple") is NaN, falsey, which
returns false
    if(x) tot += x;
}
console.log('tot:', tot);
```

5. Given this empty array, numsObjArr, and starter loop, populate the array with objects, each having four properties:

- num : a number from 1-10
- sq : the square of the number
- sqRt : the square root of the number
- even : true if the numer is even, else false

```
const numsObjArr = [];

for(let i = 0; i < 10; i++) {
    let even = i % 2 == 0 ? true : false;
    let obj = {num: i, sq: i**2, sqRt: Math.sqrt(i), even: even};
    numsObjArr.push(obj);
}

console.log(numsObjArr);
/*
{num: 2, sq: 4, sqRt: 1.4142135623730951, even: true}
{num: 3, sq: 9, sqRt: 1.7320508075688772, even: false}
{num: 4, square: 16, sqRt: 2, isEven: true}
*/
```