



1. Write a for loop that makes the following array:

[3, 5, 7, 9, 11, 13, 15, 17, 19, 21]

Solution explained:

- New, empty array, holds the output
- Counter variable, `i`, starts at 3
- Loop continues as long as counter `i <= 21`
- Values are increasing by 2, so we need incrementer: `i += 2`.

```
const myNums = [];  
for(let i = 3; i <= 21; i += 2) {  
  myNums.push(i);  
}  
console.log(myNums);
```

2. Write a for loop that makes the following array:

[100, 80, 60, 40, 20, 0, -20, -40, -60, -80, -100]

Solution explained:

- New, empty array, holds the output
- Counter variable, `i`, starts at 100
- Loop continues as long as counter `i >= -100`
- Values are decreasing by 20, so we need decrementer: `i -= 20`.

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

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

Solution explained:

- Loop through the array.
- Each time through, add the current item, `nums[i]` to `sum`.

```
let nums = [154, 236, 314, 467, 532, 689, 703];
let sum = 0;

for(let i = 0; i < nums.length; i++) {
    sum += nums[i];
}
console.log('nums sum:', sum); // 3095
```

4. Given an array of mixed numbers, 'num-like strings' and fruits, add up the nums and 'num-like strings'. This requires you to ignore the fruits and to convert the 'num-like strings' to actual numbers. Hint: You need the `Number()` method for this.

Solution explained:

- Convert the 'num-like strings' to numbers, so that we can add them.
- Skip the fruits, since they cannot be converted to numbers.
- Add each eligible item as we loop through the array.
- `Number('55')` returns `55`
- `Number('apple')` returns `NaN`.
- `NaN` is falsey, so it returns false in an if-statement.
- So, add up values that are NOT `NaN`.

```
const mixedBag = ['apple', 93, 67, 'banana', '87', '199', 'cherry',
211, 67, 'kiwi', '155'];
let sum = 0;

for(let i = 0; i < mixedBag.length; i++) {
    // attempt to convert the current item to a number
    let x = Number(mixedBag[i]);
    if(x) { // returns true if NOT NaN
        sum += x;
    }
}
console.log('mixedBag sum:', sum); // 879
```

NEXT: Lesson 05.02