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## Week 1 Homework - Due 10/05/15 at 11:59pm

1. Write a function that determines if a word is a palindrome **\*\*Do not use Array.reverse().**

```
isPalindrome('kayak'); // true
isPalindrome('cook'); // false
```

2. Write a function that takes a string and replace repeated characters

```
replaceLetters("parallel"); // para**el
replaceLetters("muhaaa"); // muh***
```

3. Write a function that finds the letter which occurs the most

```
repeatingLetters(['z', 'y', 'x', 'x', 'w', 'z', 'y', 'u', 'y', 'y']);
// value: y, occurrences: 4
// OR
// { z: 2, y: 4, x: 2, w: 1, u: 1 }
```

4. Write a function that shuffles an array. The results should be random. HINT: Use Math Object - Math.floor(), Math.Random()

```
shuffleArray([1, 2, 3, 4, 5]); // [3, 5, 1, 2, 4]
```

5. Write a function that takes two numbers and a math operator (+, -, \*, /) and performs the calculation.

```
calculate(2, 8, '-'); // 2 - 8 = -6
calculate(2, 8, '+'); // 2 + 8 = 10
calculate(2, 8, '*'); // 2 * 8 = 16
calculate(2, 8, '/'); // 2 / 8 = 0.25
```

6. Write a function that sums all the numbers (string value numbers too) in an array with mixed types

```
sumArray([1, 2, 'a', 4, '7', 'b', 'c', 7]); // 21
```

7. Write a function that takes a grocery array and tax amount as a percent. This function should calculate the total paid by applying the tax to each grocery item. HINT: use .toFixed() to force decimals to 2 places.

```
var groceries = [
  { name: 'Orange Juice', price: 2.00 },
```

```
{ name: 'Milk', price: 3.50 },
{ name: 'Cereal', price: 2.00 },
{ name: 'Sugar', price: 1.75 }
];
totalPaid(groceries, 9.5);

//
{ total: '10.13',
  groceries:
    [ { name: 'Orange Juice', paid: '2.19' },
      { name: 'Milk', paid: '3.83' },
      { name: 'Cereal', paid: '2.19' },
      { name: 'Sugar', paid: '1.92' } ] }
```

