Lab Exercise 6: Basic Syntax 2

The last two problems are quite a bit more difficult than the first three.

1. Create an array containing four random numbers. Use one-step array allocation. Print out the array by evaluating the array variable in Firebug.

```
var fourNums = ...;
fourNums; --> [0.871570877817405, 0.9107447521970577,
               0.743357509580703, 0.6571292972456975]
```

2. Create an array containing 100 random numbers. Use two-step array allocation. Print out the array.

```
var hundredNums = ...;
for(...) { ... }
hundredNums; --> [0.8742489161574934, 0.7147785711684753, 0.8062322101495641,
                  ...
                 0.41288219216760613, 0.5113443687277072]
```

3. Make a function that given an array of strings, where each string represents a number, returns an array of the corresponding numbers.

```
var strings = ["1.2", "2.3", "3.4"];
var nums = numberArray(strings);
nums; --> [1.2, 2.3, 3.4]
```

4. Write a function that, given a string, will return the longest token (consecutive string of characters) that contains neither an a nor a b.

```
longestToken("ababcdababefgababhiab"); --> "efg"
longestToken("aba"); --> ""
```

5. Write a function that, given an array of strings, will compute the sum of the lengths of the words that do not contain a "q". Do not use a loop or the forEach method, only array methods (filter, map, reduce) and string methods/properties (indexOf, length).

```
var test1 = ["stop", "quit", "exit"];
lengthOfNonQWords(test1); --> 8
var test2 = ["queen", "quit"];
lengthOfNonQWords(test2); --> 0
```