Exercises: 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.

   ```javascript
   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.

   ```javascript
   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.

   ```javascript
   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.

   ```javascript
   longestToken("ababababababаб""); --> "abab"
   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).

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