Exercises: Basic Syntax 1

For all of these exercises, use the "more powerful practice" approach from the first lecture, where you load an HTML file that has a script tag pointing at a JavaScript file, test the function calls in Firebug or Chrome, and reload the HTML page each time you change the function definitions.

1. Make a function that returns "even" or "odd" depending on the number passed to it.

```
parity(1); --> "odd"
parity(2); --> "even"
```

2. The notes showed a simple version of max that took exactly two arguments. Update this to take exactly three arguments. Note that the builtin version of Math.max takes any number of arguments, which is much better, but we don't know how to do variable arguments yet. And, of course, no using Math.max on this exercise.

```
max(1, 2, 3); --> 3
max(1, 3, 2); --> 3
max(3, 2, 1); --> 3
```

3. Copy the flipCoin function from the last set of exercises. Now, make a function that, given a number, flips a coin that many times and returns the number of heads.

```
numHeads(10); --> 4
numHeads(10); --> 6
numHeads(10); --> 6
```

4. Make a function that takes a number of flips and returns the fraction that were heads.

```
headsRatio(10); --> 0.7
headsRatio(10); --> 0.4
headsRatio(10000); --> 0.5023
headsRatio(10000000); --> 0.4999948
```

5. Make a function that takes a number and a short string, and returns the string concatenated that number of times.

```
padChars(5, "x"); --> "xxxxx"
padChars(7, "-"); --> "-------"
```

6. Write a function that returns the number of times you have to roll a die to get a 6. (Minor hint: compare Math.random() to 5/6).

```
numRollsToGetSix(); --> 13
numRollsToGetSix(); --> 2
```

7. Update the HTML page so that each time you reload it, you randomly see either a "Have a GOOD day!" or "Have a BAD day!" message. If you know some CSS already, make the font big.