CMSC330 Spring 2015 Quiz #1

Name _____

Discussion Time (circle one):   10am   11am   12pm   1pm   2pm   3pm

Discussion TA (circle one): Amelia Casey Chris Mike Elizabeth Eric Tommy

Instructions
- Do not start this test until you are told to do so!
- You have 15 minutes for this quiz.
- This is a closed book exam. No notes or other aids are allowed.
- Answer essay questions concisely in 2-3 sentences. Longer answers are not needed.
- For partial credit, show all of your work and clearly indicate your answers.
- Write neatly. Credit cannot be given for illegible answers.

1. (4 pts) Name an important difference between Ruby's *nil* and Java's *null*.

2. (10 pts) What is the output (if any) of the following Ruby programs? Write FAIL if code does not execute. Output "nil" for "puts x" when x is nil (as in Ruby 1.8.7), instead of outputting a blank line (as in Ruby 1.9.3).

    a. (3 pts)
        ```
        a = [ ]                                # Output =
        a[1] = "b"
        a = { }
        a[2] = 3
        puts a[1]
        ```

    b. (3 pts)
        ```
        if "Hello Universe" =~ /^([a-z]+)/ then     # Output =
                puts "Found #{$1}"
        else
                puts "Not found"
        end
        ```

    c. (4 pts)
        ```
        a = [7, 3]                              # Output =
        a[3] = "foo"
        a.each {|x| puts x}
        ```

3. (6 pts) Write a Ruby method **triple** that given an array of integers *int_values*, uses the Array.each, Array.sort method and code blocks to print each array value and its corresponding tripled value, in sorted descending order. For instance, given the array [3, 2, 6, 1], your code should print out the following:

6 18
3 9
2 6
1 3

Some helpful functions (not all need to be used)	
a.each { … }	// apply code block to each element in array
a.sort { … }	// sort based on specifications of code block
puts b	// print b followed by a newline
c.to_s	// returns string for c

def triple(int_values)