# Lesson 4 Homework: Arrays, Hashes, Loops, and Review

## Review the chapter on Methods in the Chris Pine book.

## Secret Santa

Write a Secret Santa app that takes a list of people and outputs matches for Secret Santa gift-giving.

## Review and Practice

We've now covered the basic fundamentals of Ruby. You'll see the same logical structure in every other object oriented language. They all have strings, arrays, hashes, loops and conditionals. If you have these basic concepts down its much easier to pick up another programming language.

Now it's time to see if you can apply the concepts you've learned. Try to complete these problems without looking anything up or running code. After you come up with your answers, test them out.

1. Write a script that takes user input and passes it to a method as an argument and then displays it into the following concatenated string:  
   Hello (name). Nice to meet you.
2. Correct the code below so it displays the sum of x, y, and z:  
   def sum\_numbers(x,y)  
    x+y+z  
   end
3. Add to the code below so it displays "Don't forget to (to do item)." for each item.  
   to\_do = ["wash car", "buy groceries", "finish homework", "pay bills"]
4. What is the return value of the following:  
   def avg(a, b, c, d)  
    total =a + b + c + d  
    avg = total / 4  
    return c + d  
   end  
   avg(5, 8, 6, 10)
5. What is the return value of the following:  
   names = ['David', 'Trevor', 'Sarah', 'Mason']  
   names[2]
6. How do you add "bobcat" to this list of wild cat species?  
   wild\_cats= ['cheetah', 'lion', 'leopard', 'tiger']
7. How do you retrieve the birthplace of user1?  
   user1= {:firstname=> "Johnny", :lastname => "Begood", :gender => "male",   
    :dob => "08/21/1981", :birthplace => "Seattle, WA"}
8. How do you add "Atlanta, GA " as the current city for user1 in the hash from question 7?
9. How would you retrieve "y" in the following array?  
   alpha\_soup= ["c", "k", "y", "u"]
10. How would you retrieve "14" in the following hash?  
    alphabits= {"d" =>4, "k" => 14, "u" => 52}
11. Write a loop that continues to display random numbers between 1 and 10 until the number generated is 7.
12. Continuing from question 11 above, push each randomly generated number to an array. Then use an each loop and a conditional statement inside to display the total amount of numbers that are under 6. Then display a statement that reads: "There are (total) numbers under 6."

## Bonus!

Add at least one new feature to your pop trivia app. For example, keep a score, ask all questions, provide categories.