**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**AP Computer Science**

**Quiz - Strings**

1. **public** **boolean** whatever( String s){

**return** (s.charAt(0) == s.charAt(s.length() – 1))

}

a. What is returned by the method call whatever(“abba”)?

b. What is returned by the method call whatever(“abcd”)?

2. **public** **int** mystery(String s){

**int** count = 0;

**if**(s.charAt(0) == ‘o’){

count = 1;

}

**if**(s.length() == 1){

**return** count;

}**else**{

**return** count + mystery(substring(1));

}

}

What is returned with the call mystery(“oooxx-xxooo”)?

1. Write a method that performs a simple Qpig conversion of a String. The method will accept a String as a parameter and return the converted String. The String will consist of a single word, which will be a name. The conversion will take the first letter of the name, put it at the end of the String and then add “ay”. For example:

Peter => eterPay

Tony => onyTay

Pepper => epperPay

Q => Qay

**BONUS QUESTIONS**

**1. (5 points)**

Ole Santa's pack held thirty toys  
Made by his elfin crew;  
And though none made the same amount,  
Each elf made more than two.  
The elf named Cher made one more Christmas toy  
Than the elf who dressed in reds,  
But Cher made one less Christmas toy  
Than the elf who made the sleds.  
Spry Johnny Elf made racing cars;  
Five toys were made by Jane.  
The elf who dressed in yellow suits  
Made each and every train.  
The elf who always dressed in green  
Made one-third as many as Sue;  
Cute Marcia elf was dressed in orange,  
And one elf dressed in blue.  
The elf who made the spinning tops  
Made the most toys of them all.  
Another perky smiling elf  
Made each and every ball.  
Ole Santa's pack held thirty gifts  
All tagged for girls and boys.  
From the clues that you've been given,  
Now guess who made the toys!

**2. (3 points)**

What are the next two numbers in this series:

3, 7, 14, 23, 36, 49, ...

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**ANSWER:**

Cute Marcia was in orange and made seven sleds.  
Sue was in blue and made nine spinning tops.  
Jane was in red and made five balls.  
Spry Johnny was in green and made three racing cars.  
Cher was in yellow and made six trains.

What are the next two numbers in this series:  
  
3, 7, 14, 23, 36, 49, ...

**.. 66, 83, ...**  
The series is the sum of the series of positive prime numbers and squares, i.e.:  
  
2,3,5,7,11,13....  
+  
1,4,9,16,25,36...