AP Computer Science A
Ticket Out the Door
Set 28: Recursion

Name _____ Period _____

Skill 28.3 Exercise 1

Complete the stack diagram for the code block shown

	Stack
| ```java
class Main {

public static void main(String[] args) {
        Recursion.reduceByOne(4);
    }
}


class Recursion{


public static void reduceByOne(int n){
        if(n > 0){
                reduceByOne(n-1);
        }
    }
}
``` | |

Skill 28.4 Exercise 1

Complete the stack diagram for the code block shown, then indicate the output.

```java
class Main {
public static void main(String[] args) {
        System.out.println(Recursion.pls(4));
    }
}


class Recursion{

    public static int pls(int n)
    {
        if (n == 0)
            return 5;
        else if (n == 1)
            return 11;
        else
            return pls(n - 1) + 2 * pls(n - 2);
    }
}
```

Name _____ Period _____

Stack
Output

Skill 28.4 Exercise 2

Complete the stack diagram for the code block shown, then indicate the output.

Code	Stack	Output

``java
class Main {
public static void main(String[] args) {
 	
        Recursion.homer(9));
    }
}
 	
class Recursion{
public static void homer(int n)
{
    if (n <= 1)
        System.out.print(n);
    else
        homer(n / 2);
 	
System.out.print("," + n);
 	
}
``		

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