

```
public static int compute(int number) {  
    if (number <= 2) {  
        return 0;  
    }  
    return compute(number - 1) * compute(number - 2);  
}
```

The diagram illustrates the recursive calls for the `compute` function. It shows a sequence of nodes connected by lines, representing the call stack. The nodes are colored in a gradient from purple to yellow to orange. The lines connect the nodes in a way that shows the sequence of calls and returns. The first call is to `compute(4)`, which calls `compute(3)`, which calls `compute(2)`, which returns 0. Then `compute(3)` returns 0, and `compute(4)` returns $0 * 0 = 0$. The diagram shows the sequence of calls and returns for the recursive function.