

```
public static int compute(int number) {  
    if (number == 0) {  
        return 0;  
    }  
    return (number % 10) + compute(number / 10);  
}
```

The diagram illustrates the recursive calls for the `compute` function. Nodes are represented by colored circles, and lines connect them to show the flow of execution and return values.

- Base Case:** The first cluster of purple nodes represents the base case where `number == 0`, returning 0.
- Recursive Calls:** Grey nodes represent the initial call and subsequent recursive calls. Red nodes represent the return values being passed back up the call stack.
- Return Calculation:** Orange and yellow nodes represent the calculation of the return value at each step, which is `(number % 10) + compute(number / 10)`.