

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

The diagram illustrates the recursive calls for the `compute` function. The dots represent the state of the function at different points in the call stack. The lines connect the dots to show the sequence of calls and returns. The dots are arranged in a roughly triangular shape, with the base at the bottom and the apex at the top. The lines show the flow of control from the initial call at the bottom to the base case at the top and back down to the final return at the bottom.