

18. 2. 3

a)

```
public class Test {
    public static void main(String[] args) {
        System.out.println(
            "sum is " + xMethod(5));
    }

    public static int xMethod(int n) {
        if (n == 1)
            return 1;
        else
            return n + xMethod(n - 1);
    }
}
```

output:

$5 + 4 + 3 + 2 + 1 = 15$

$\downarrow$        $5 + 4 + 3 + 2 + 1$

$\hookrightarrow 5 + xMethod(4)$        $\downarrow$        $4 + 3 + 2 + 1$

$\hookrightarrow 4 + xMethod(3)$        $\downarrow$        $3 + 2 + 1$

$\hookrightarrow 3 + xMethod(2)$        $\downarrow$        $2 + 1$

$\hookrightarrow 2 + xMethod(1)$

$\downarrow$  1