

$$S(n) = 1^2 + 2^2 + 3^2 + \dots + n^2$$

def Larry(Lj) ← parameter, local variable

Algorithm:
 not parameter, local variable

```

sum ← 0
for i = 1 to n
    sum ← sum + i2
    
```

Suppose we want:

$$k^2 + (k+1)^2 + (k+2)^2 + \dots + n^2$$

We see this is:

$$1^2 + 2^2 + 3^2 + \dots + (k-1)^2 + \boxed{k^2 + (k+1)^2 + \dots + n^2}$$

this is $S(k-1)$.

so what we want is:

$$S(n) - S(k-1)$$

↑ this is what Moe computes