

We have simply  $\sum_{i=0}^n \sum_{j=0}^i f(j)g(i) = \sum_{i=0}^n \sum_{j=i}^n f(i)g(j)$

or more formally  $\sum_{i=a}^n \sum_{j=b}^{i-a+b} f(j-b)g(i) = \sum_{i=a}^n \sum_{j=i}^n f(i-a)g(j)$

There're many more different ways

e.g.1 Sum of elements in a matrix, starting from the bottom-left corner

$$\sum_{i=a}^n \sum_{j=i}^n f(j-i)g(j)$$

e.g.2 If positions of all  $a_?$ s are unique and total number of  $a_?$  is max, then

$$\sum_{?}^? a + \sum_{?}^? a + \cdots = \sum a$$