A[0 .. n-1] DIVIDE ET IMPERA

```
SUM (A, J, K)
    if J == K  return A[J] * pow(2, J);
    X ← (J+K)/2
    A ← SUM(A, J, X);
    B ← SUM(A, X+1, K);
    return A+B;
```

1 3 5 7 9

$1 \cdot 2^0 + 3 \cdot 2^1 + 5 \cdot 2^2 + 7 \cdot 2^3 + 9 \cdot 2^4$

J k
0, 4
x = 2

A(0,2)	x = 1	
A(0,1)	x = 0	
A(0,0)	return $1 \cdot 2^0$	← A
	$1,1$ $3 \cdot 2^1$	← B

0 2 0 2
1 1
0 1
0

```
SUM2 (A, K, J, X)
    if J == X then return A[J];
    L ← (J+X)/2
    C ← SUM2(A, K, J, L);
    D ← SUM2(A, K, L, X);
    return (C * D) mod K
```