

Algorithm 1

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1 Polynomials

1.1

```
def poly(num):  
 $P_n(x) = poly(num - 1) + a_n * x^n$ 
```

1.2

```
def poly(num):  
 $P_n(x) = poly(num - 1) + a_n * x^{n-1} * x$ 
```

1.3

```
1.  
def poly(num,a,n,x):  
num[x]=poly(num,(a),(n-1),(x-1)) + a[n] * (x ** n)  
return num[x]  
  
2.  
def poly(num,a,n,x):  
num[x]=poly(num,(a),(n-1),(x-1)) + a[n] * (x ** (n - 1)) * x  
return num[x]  
  
3.  
def poly(n,x):  
for i in n  
p=(p * x)+i  
return p
```

2 one-mapping

2.1

for i in list array.length do
if list array[i] is not in mapping array, remove list array[i] and mapping array[i]
end for

2.2

```
def one_one_map(list_array, map_array):  
    i=0  
    while i < len(list_array):  
        is_there=False  
  
        j=0  
        while j < len(mapping_array):  
            if list_array[i]==mapping_array[j]:  
                is_there=True  
  
                j++  
  
            if is_there!=True:  
                del list_array[i]  
                del mapping_array[j]  
  
                one_one_map(list_array, mapping_array)  
  
        i++  
  
    return list_array
```

(list array has the elements of the left side, while mapping array has the corresponding mappings.)