

Snap:

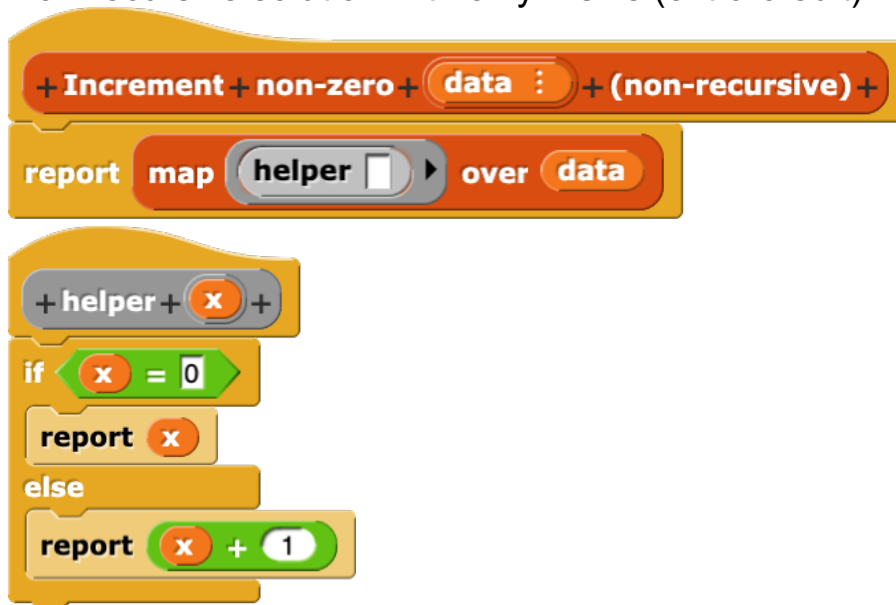
a. Recursive solution:

```
+ Increment + non-zero + data : + (recursive) +  
if empty? data  
  report data  
else  
  if item 1 of data = 0  
    report item 1 of data in front of  
      Increment non-zero all but first of data (recursive)  
  else  
    report item 1 of data + 1 in front of  
      Increment non-zero all but first of data (recursive)
```

b. Non-recursive solution with loops:

```
+ Increment + non-zero + data : + (non-recursive) +  
script variables new list  
set new list to list  
for each item of data  
  if item = 0  
    add item to new list  
  else  
    add item + 1 to new list  
report new list
```

c. Non-recursive solution with only HOFs (extra credit):



**Python:**

```
def TAs_with_at_least_half_discussions_full(enrollment, attendance):
    TAs = []
    for TA in attendance:
        num_full = len([x for x in attendance[TA] if x >= enrollment[TA]])
        if num_full >= 5:
            TAs.append(TA)
    return TAs
```