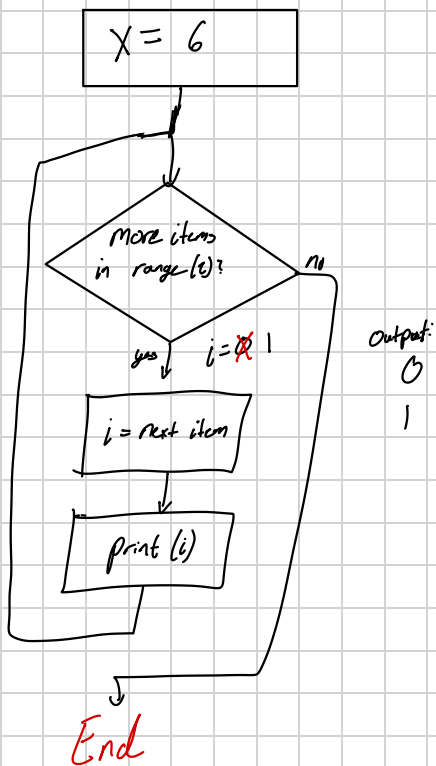
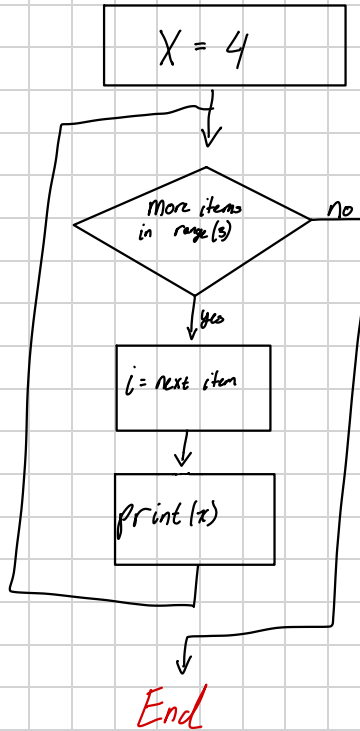


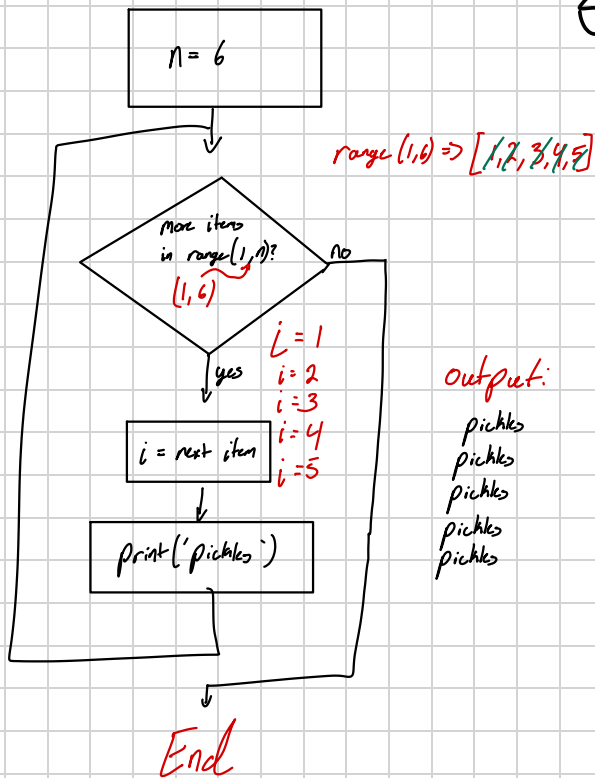
# LAB Week 6

## Flow Charts

#1:



3)



5)

The syntax 'for i in range(10)' means:

for  $\rightarrow$  Tells python to create a 'for' loop

i  $\rightarrow$  Variable to use for iteration

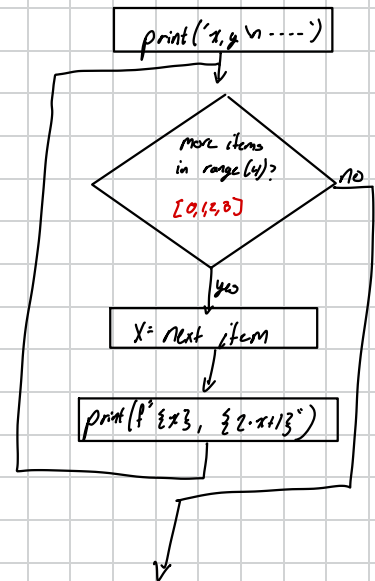
also called a 'definite loop'

in  $\rightarrow$  tells python what to iterate over

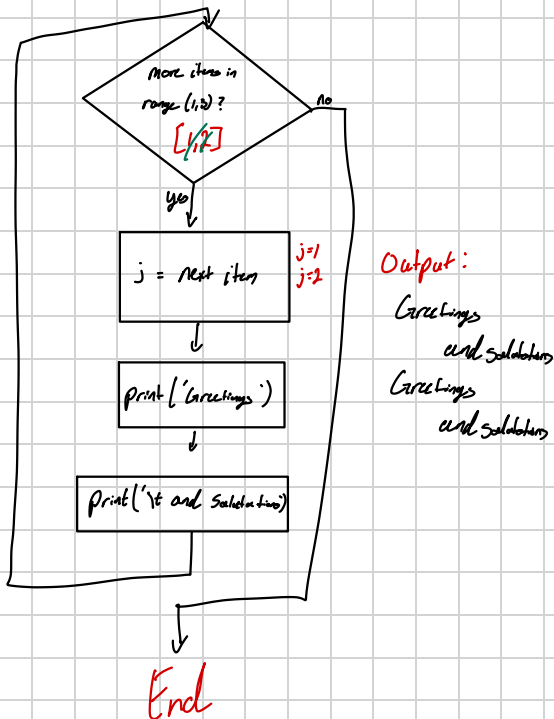
range(10)  $\rightarrow$  A collection of items

like:  $[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]$

6)



4)



7)

The code above translates a function into a table of values.

In the case of #5,  
it converts:

$$f(x) = 2x + 1$$

⇓

x	y
0	1
1	3
2	5
3	7

Pros:  
readable  
quick to make  
versatile

Cons:  
low resolution  
can't show discontinuous functions  
divide by zero issues

8)

b = 1

print('x, y...')

More items in  
range(4)?  
[0, 1, 2, 3]

x = next item

print(f'{x}, {x\*\*2/2 + (b+1/2)\*x}')  
End

Output:

x	y
0	6.0
1	1.0
2	1.0
3	6.0

9)

number = 5535

digits = []

more items  
in  
range(4)?

digits.append(number // 10 + i % 10)

digits = [5, 5, 3, 5]

digits.sort() digits = [3, 5, 5, 5]

small = digits[0] \* 10 + 3 + digits[1] \* 10 + 2 + digits[2] \* 10 + digits[3]

large = digits[3] \* 10 + 3 + digits[2] \* 10 + 2 + digits[1] \* 10 + digits[0]

small = 3555

large = 5563

number = large - small

number = 1948

print(number)

output:  
1948