

Jumlahkan  $N$  bilangan asli

Pertama.

$$N = 5 \rightarrow 1 + 2 + 3 + 4 + 5 = \underline{\underline{15}}$$

Sum = 0

```
for angka in range(1, N+1):  
    sum += angka
```

for angka in range (1, N+1)      angka = 1

sum += angka

sum = 1 → sum = 1

angka = 2

sum = 2 → sum = 3

for nama\_variabel in range (awal, akhir+1)

-----  
angka = N

Jumlah  $\times$  bilangan genap Pertama !

$$x = 5 \rightarrow 2 + 4 + 6 + 8 + 10 = \underline{\underline{30}}$$

Pola bilangan genap

$$U_n = 2n \quad (1 \leq n \leq \dots)$$

for angka

in range  
1 s/d x

$\times$  bilangan genap

$$U_n = 2n \quad (1 \leq n \leq x)$$

$$\underline{\underline{U_1 = 2}}, \underline{\underline{U_2 = 4}}, \underline{\underline{U_3 = 6}}, \underline{\underline{U_4 = 8}}, \dots, \underline{\underline{U_x = 2x}}$$

$$U_1 + U_2 + U_3 + \dots + U_x$$

$$= 2 + 4 + 6 + 8 + \dots + U_x$$

Sum = 0

for n in range (1, x+1):

    Un = 2 \* n

    Sum+= Un

$N = 5$

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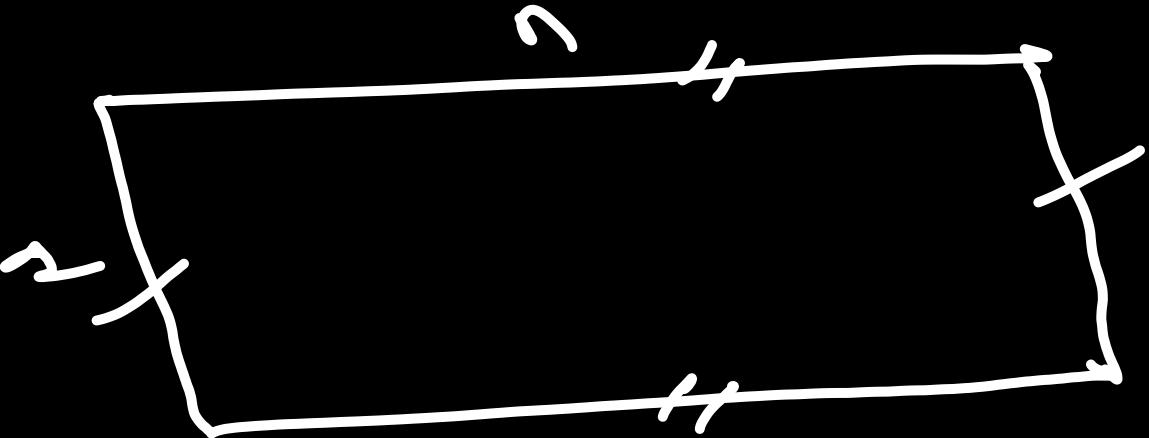
Basis 1 : 1 binrung , 4 span  
Basis 2 : 2 binrung , 3 span  
Basis 3 .. 3 binrung , 2 span  
.....

Basis N Basis - i =  $(N - i)$  span +  
 $i$  binrung

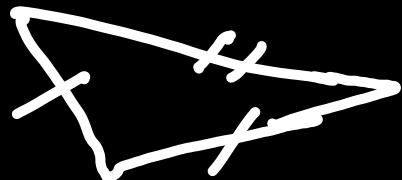
for  $r \rightarrow 1, N :$

for  $s \rightarrow \{1, N - i\} :$   
cout span

for  $x \rightarrow \{1, 1\} :$   
cout word1 ;



$1 \times n$

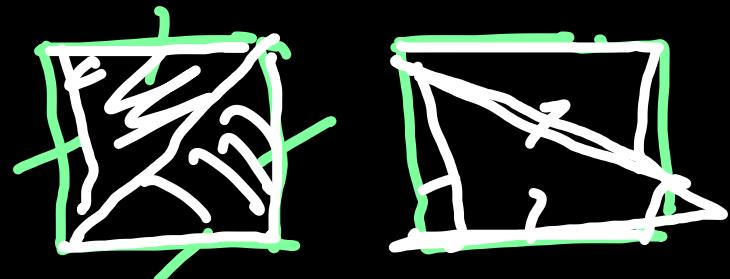


$n \times c$

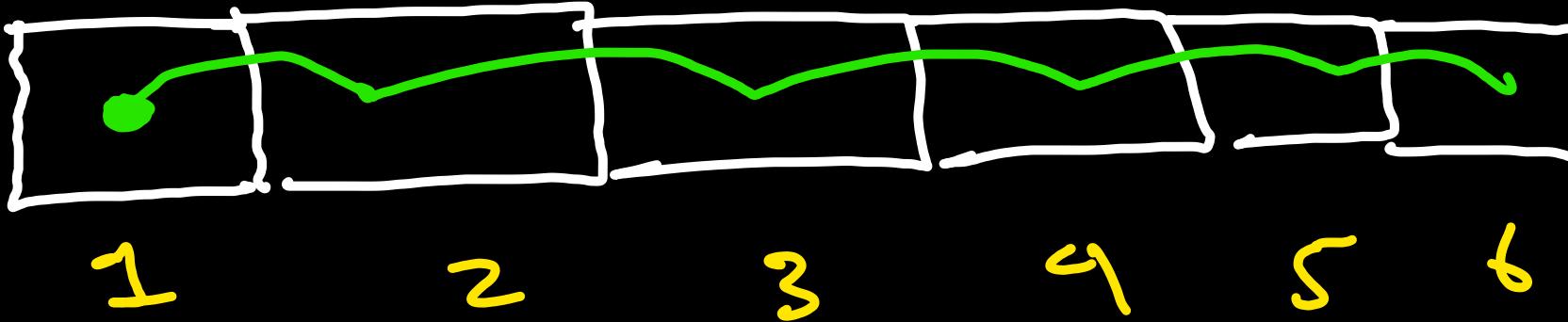
$n = 1$

$$\frac{f(c_2) = \dots ?}{f(c_1) = 2}$$

base case



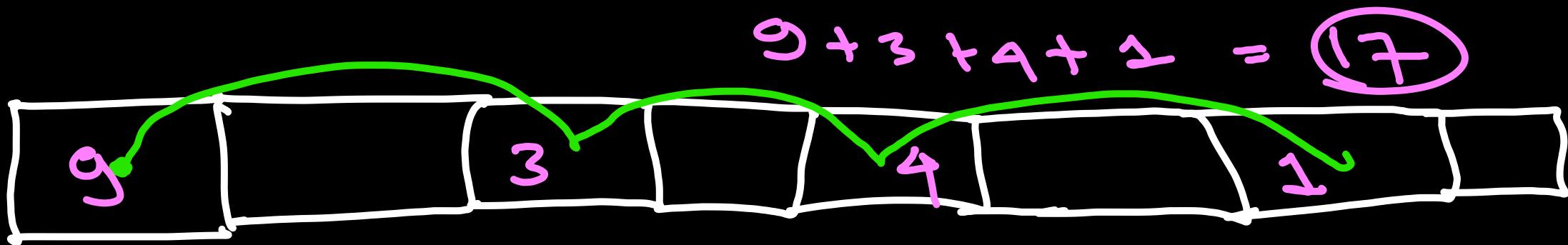
area  $\approx$  sum



posisi\_skrg = 1

# petak - i ke petak i + 1

```
for _ in range(banyak_petak):  
    posisi += 1
```



1 2 3 4 5 6 7 8

1 → 3, 3 → 5, 5 → 7

Pertukar i ke  $i+2$

## Deret Aritmatika

$$u_n = n+2 \rightarrow 3, 4, 5, 6, \dots$$

$S_n \rightarrow S_3 =$  Menghitung kali jumlah 3 angka  
Pertama dan terakhir

$$= u_1 + u_2 + u_3$$

$$\begin{aligned}S_3 &= 3 + 4 + 5 \\&= 12\end{aligned}$$

$$\begin{aligned}&\text{S } 9 \\&= 3 + 4 + 5 + 6 \\&= 18\end{aligned}$$

$$S_5 = 3 + 9 + 5 + 6 + 7 \\ =$$

Sum 5 angka pertama.

```
for i in range(1,11):  
    print(i)
```

$i = 1$   
 $\text{Print}(i) \rightarrow \text{cerak } 1$

$i = 2$   
 $\text{Print}(i) \rightarrow \text{cerak } 2$

$i = 3$   
 $\text{Print}(i) \rightarrow \text{cerak } 3$

---

$i = 10$   
 $\text{Print}(i) \rightarrow \text{cerak}(10)$

$i = \{1, 2, \dots, 10\}$   
 $i = 1$   
for  $i$  in range(1, 11):  
    for  $j$  in range(1, 11):  
        print( $i, j$ )

di setiap  
 $i$  ada for  $j$

for  $j$  (1 → 10)  
print( $i, j$ ) →  
 $j = 1$   
 $. \quad \text{print}(i, j) \rightarrow \text{cevak } 1 1$   
 $j = 2$   
 $. \quad \text{print}(i, j) \rightarrow \text{cevak } 1 2$

$j = 10$   
 $i = 2 \quad \text{print}(i, j) \rightarrow \text{cevak } 1 10$   
for  $j$  (1 → 10)

$i = 1$

$j = 2$

$j = 2$

$j = 3$

---

$j = 10$

$i = \{1, 2, 3, \dots, 10\}$

$j = 1$

$j = 1$

$j = 2$

$j = 3$

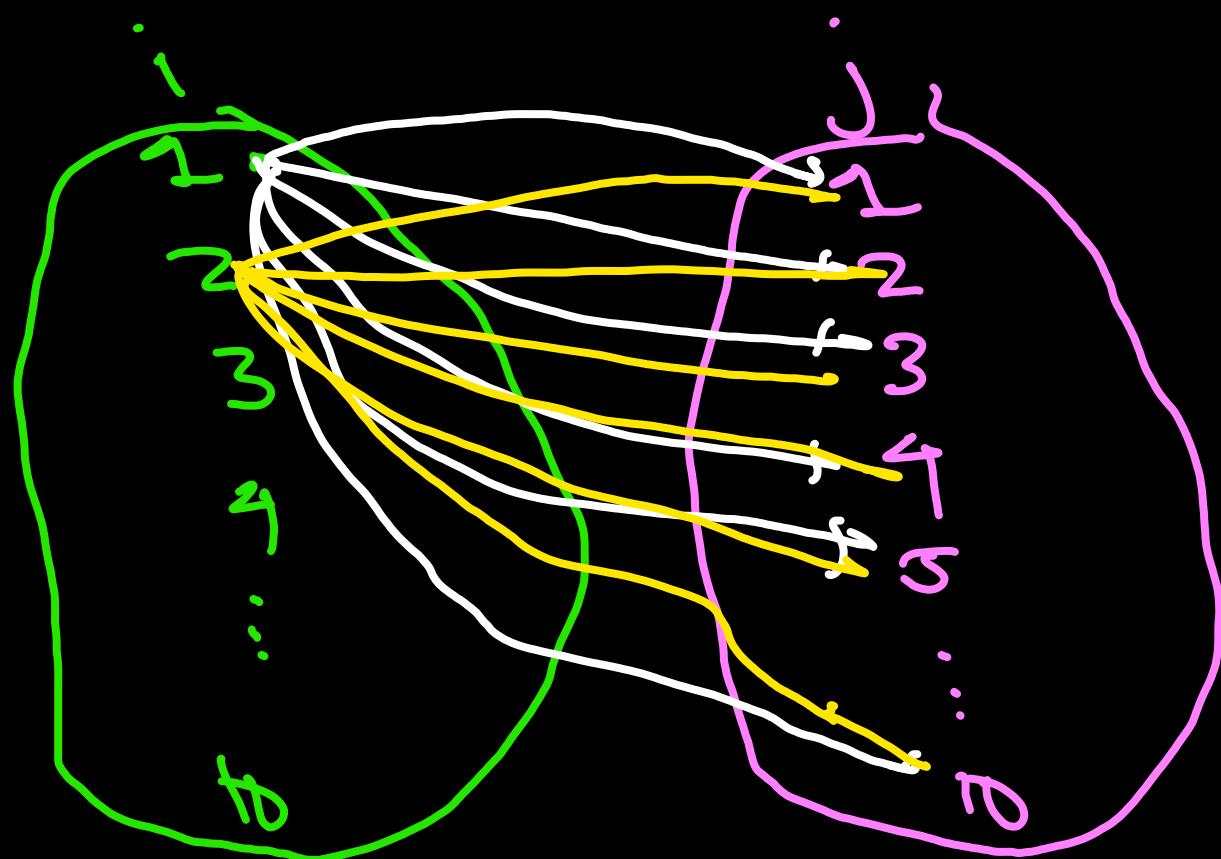
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$j = 10$

$i = \{1, 2, 3, 4, 5, \dots, 10\}$

$j = \{1, 2, 3, 4, 5, \dots, 10\}$

Relax →



```

sum = 0
for i in range(1,6):
    for j in range(1,6):
        sum += (i+j)

```

```
print(sum)
```

110

$$\begin{array}{c}
 \boxed{1+1} \\
 \boxed{1+2} \\
 \boxed{1+3} \\
 \hline
 1+5
 \end{array}
 + \quad \begin{array}{c}
 2+1 \\
 2+2 \\
 2+3 \\
 \hline
 2+5
 \end{array}
 + \dots$$

$$\underbrace{1+1+1+\dots+1}_{5x} + \underbrace{1+2+3+4+5}_{5+1}$$

$$5 \times 1 + 15 = 20 \quad 5+2 = ?$$

$$5 \times 2 + 15 = 25 \quad \dots \dots$$

$$5 \times 3 + 15 = 30 \quad \underline{5+5}$$

$$5 \times 4 + 15 = 35 \quad \times$$

$$5 \times 5 + 15 = 40 \quad +$$

150

$N = 1 \rightarrow 1 \quad i=1$

$N = 2 \rightarrow 1 \ 3 \quad i=1$

$N \rightarrow 1 \leq i \leq N$   
(i nya 1 s.d N)

1  
2 }  
 $i=2$

$N = 3 \rightarrow 1 \ 3 \quad i=1$

untuk setiap i  
cetak 1 sampai i  
1      2 }  
 $i=2$

1  
2  
3 }  
 $i=3$

$i=1 \rightarrow$  cetak 1

$i=2 \rightarrow$  cetak

$i=3 \rightarrow$

1  
2  
3  
cetak

$i = X \rightarrow$   
 $i = i$       cetak  
 $i \rightarrow X$

```
N = int(input())
```

```
for i in range(1,N+1):
    for j in range(1,i+1):
        print("#", end="")
    print()
```

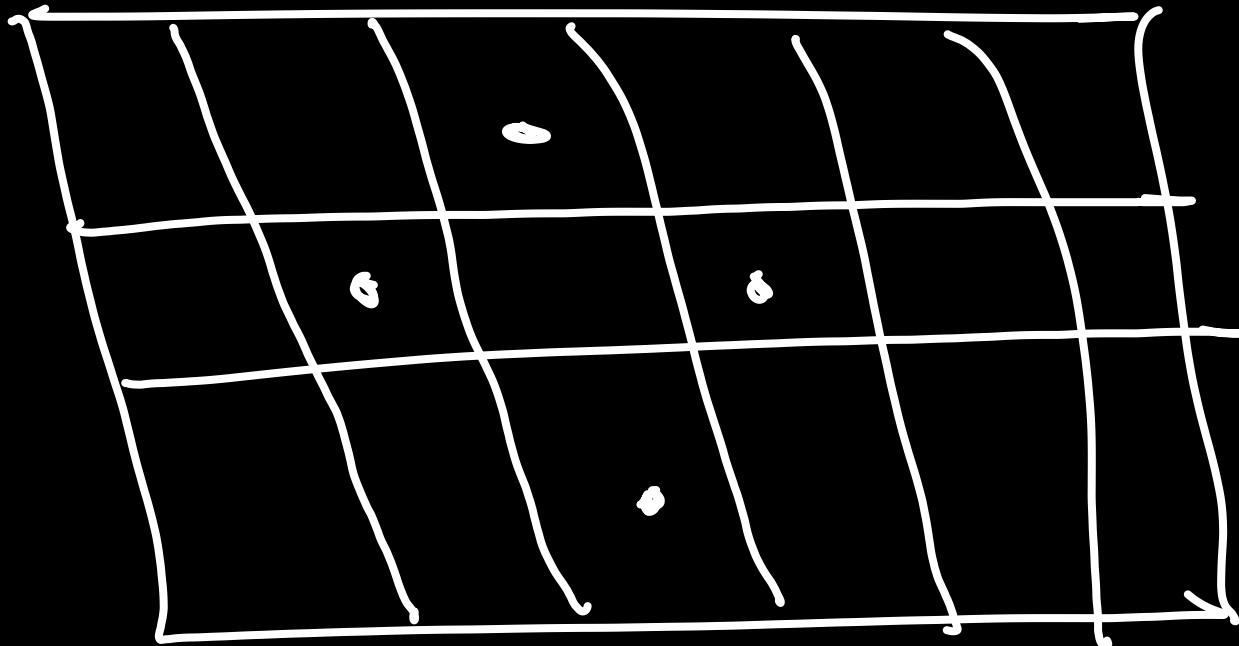
Baris / row  
1 —  
2 —  
3 —

$N = 1$   
#  $i=1$   
 $N = 2$   
# #  $i=1$   
# # #  $i=2$   
 $N = 3$   
# # #  $i=1$   
# # # #  $i=2$   
# # # # #  $i=3$

1 2 3  
| | |  
Column

anuk senap i  
dia akan  
cerak pagar  
sebanyak i kesamping  
banyak i  
sebanyak  
 $1 \leq i \leq N$   
senar baris i kali  
entek

>.X###  
#.####  
#...##  
##...>



Burut: - - -      Krum: - - -  
Timur: - - -  
Selatan: - - -





























