```
int n;
int cnt;
cnt=0;
WHILE(cnt<=n){
printf("%d",cnt);
cnt=cnt+1;
}
```

```
int cnt;
FOR(cnt=0;cnt<=n;
cnt++){
PRINTF("%d",cnt);
}
```

```
int n ; cnt = 1; int a;

do{
printf("inserisci un valore:"); }
scanf("%d", &n);
}while(n<1);

~~a = n;~~
cnt = n - 1;
```

```
while(cnt>0 ){
n = n * cnt
cnt--;
```

$n! = n(n-1)\cdot(n-2)\cdots 1$

$5! = 5\cdot 4\cdot 3\cdot 2\cdot 1$

$n! = n \cdot (n-1) \cdots 1$

FAT

```
int Fat=1;
int cnt=1;
int n; // INPUT

WHILE(cnt<=n);
  Fat=Fat·cnt;
  cnt++;
}
```

Fat2

$Fat = 1 \cdot 2 \cdot 3 \cdots (n-1) \cdot n$

```
int n;
int Fat2=1;
int cnt;
cnt=n;
While(cnt>0){
  Fat2=Fat2·cnt;
  cnt--;
}
```

```
INT FAT=1; INT CNT;
FOR (CNT=N; CNT>0; CNT--) {
    FAT=FAT*CNT;
}
```

ES TRIANGOLO DI FLOYD

INPUT

n

(n>0)

1 ↵

2 3 ↵

4 5 6 ↵

7 8 9 10 ↵

WHILE( ) {

WHILE( ) {

}

}

DO-WHILE

```
int n;
int riga;
int colonna;
```

COND. TRUE $\xrightarrow{\text{NOT}}$ COND. FALSE

$(n>0) \longrightarrow (n<=0)$

```
do {
    printf("Inserisci n: ");
    scanf("%d", &n);
} while(n<=0);
```

$\longrightarrow$

```
printf("....");
scanf("%d", &n);
while(n<=0){
    printf(....);
    scanf(..);
}
```

```
riga = 1;
int num=1;
while(riga<=n){
    colonna = 1;
    while(colonna<=riga){
    printf("%d", num);
    num++;
    colonna++;
    }
    printf("\n");
    riga++;
}
```

```
~~riga = 1~~;
int num = 1;
for(riga=1; riga<=n; riga++)
{ ~~colonna = 1~~;
  for(colonna=1; colonna<=riga; colonna++)
  { Printf("%d", num)
    num++;
  }
  Printf("\n");
}
```

ES DIRE SE UN NUMERO È PRIMO O NO (CON FOR)

```
int n;
int cnt;
int div=0;
for(cnt=1;cnt<=n;cnt++){
IF(n%cnt==0){
div =div+1;
}
}
```

```
IF (div==2){
    PRINTF("n e` un numero primo");
}
else {
PRINTF("n non e`un numero primo");
}
```

$$!(a >= 10 \;\&\&\; a < 30) \;||\; (b > 5 \;\&\&\; b\%2 == 0)$$

$$\equiv$$

$$(a <= 10 \;||\; a >= 30) \;\&\&$$

$$(b <= 5 \;||\; b\%2 != 0)$$

STAMPARE I NUMERI PARI TRA n ed m (FOR)

(n<=m)

n=5
+1
m=10

6
8
10

n, m, cnt

```
FOR(cnt=n; cnt<=m; cnt++) {
    if(cnt%2==0) {
        print(...);
    }
}
```

```
if(n%2==1) { //DISPARI
    n++;
} //n DIVENTA PARI
for(cnt=n; cnt<=m; cnt+=2) {
    printf(..);
}
```

```
int a = 3;
int i = 3;
int j = 6;
while( i < j ) {
    a = a * i;
    i++;
}
```

$i = 6$

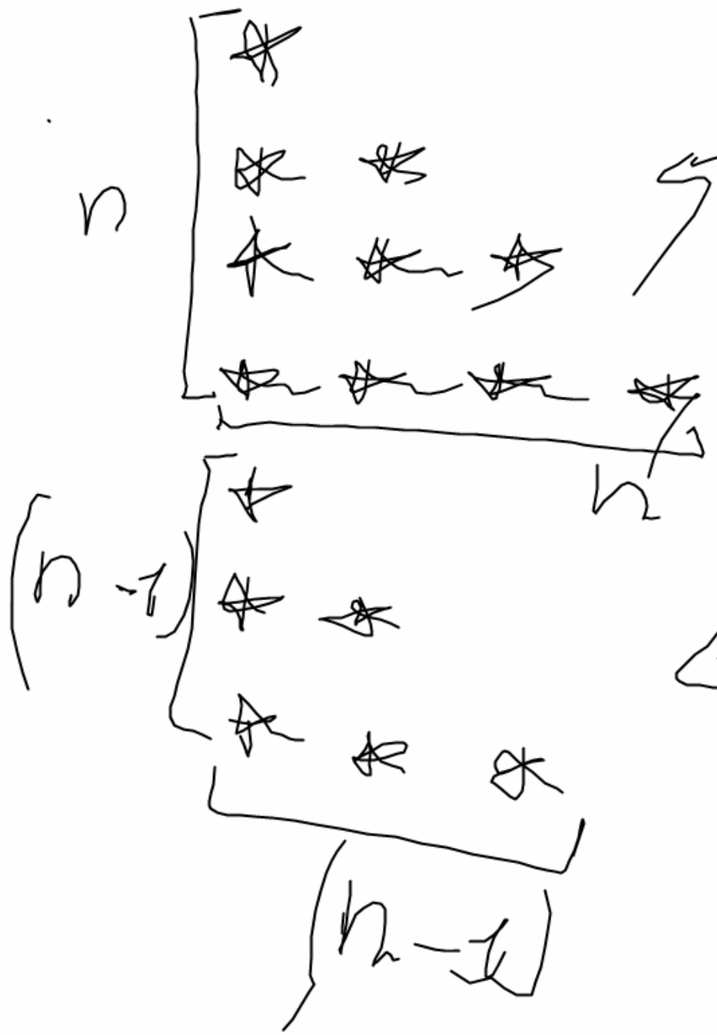
$a = 180$

NO

```
while( i < j ) {
    ...
}
```

INPUT n

(n > 0)



CICLO(...)

CICLO(...)

n = n - 1

CICLO(...) RIGA = n

CICLO(...) COLONNA = RIGA

ES. DATO UN NUMERO n ($n > 0$)
SOMMARE I PRIMI n NUMERI
DISPARI $[n \to n^2]$

ES $n = 5$

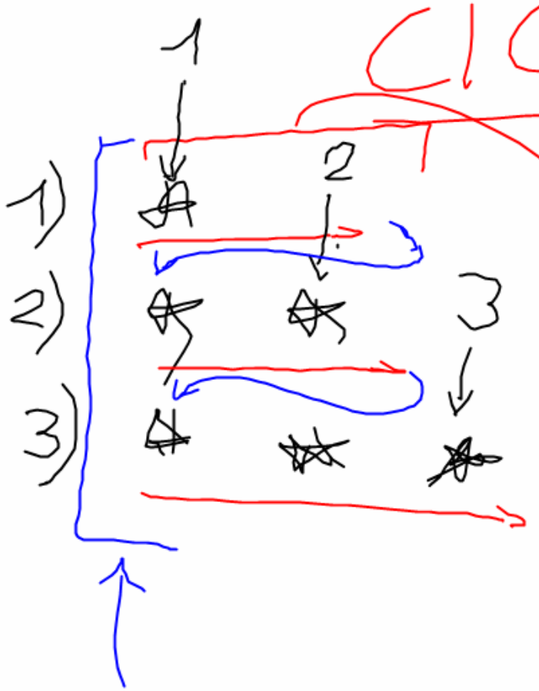
$(n \cdot 2)$

$1 + 3 + 5 + 7 + 9 = 25 = (5)^2 = (n)^2$

$+2 \quad +2 \quad +2 \quad +2$

```
int n;
int i;
int SOM=0;
FOR(i=1; i<=(n·2); i=i+2){
    SOM=SOM+i;
}
```

CICLI ANNIDATI



CICLO (PER COLONNE)

CICLO (PER RIGHE)

CICLO (RIGHE)

COL = 1

CICLO (COLONNE)

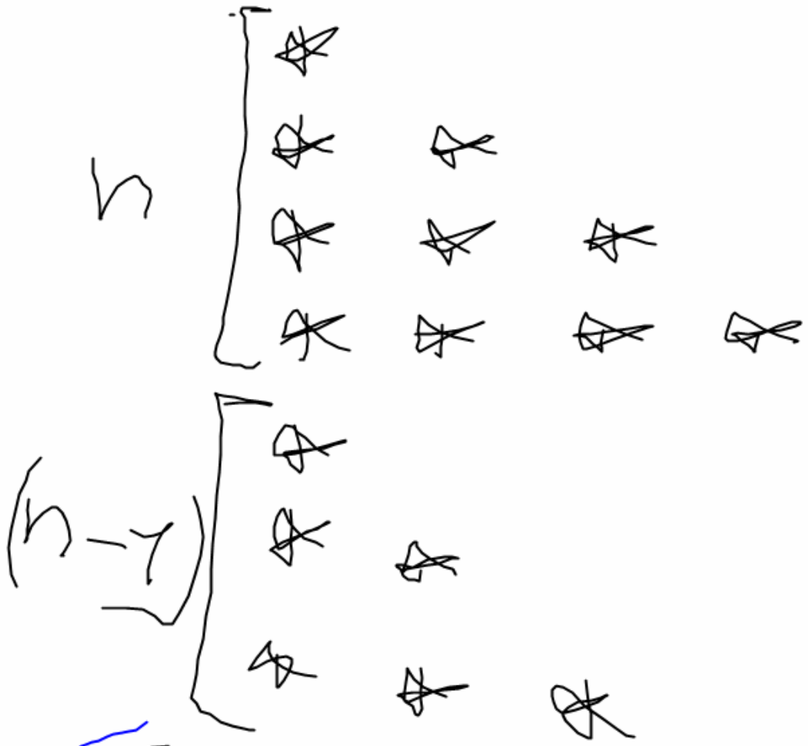
(n) RIGA++

$(n>0)$ n

```
*
*  *
*  *  *
```

```
int RIGA=1;
int COL=1;
while(RIGA<=n) {
    COL=1;
    while(COL<=RIGA){
        printf(...);
        COL++;
    }
    printf("\n");
    RIGA++;
}
```

```
int RIGA=1 int col=1
for(RIGA=1; RIGA<=n; RIGA++){
    for(COL=1; Col<=RIGA; Col++){
        printf(char);
    }
    printf(\n);
}
```




```
CICLO (RIGHE)
  CICLO(COL)
n--
CICLO (RIGHE)
  CICLO(COL)
```

```
i=1
CICLO (i<=2){
  CICLO (RIGHE<=n){
    COL=1;
    CICLO (COL <=RIGHE){
      ⋮
      COL++;
    }
    RIGHE++;
    PRINTF("\n");
  }
  i++; n--;
}
```

ES


```
FOR(RIGHE=N; RIGHE>=1; RIGHE--){
    FOR(COL=RIGHE; COL>=1; COL--){
        PRINTF("*");
    }
    PRINTF("\N");
}
```

$n=5$

1	2	3	4	5
—	2	3	4	5
—	—	3	4	5
—	—	—	4	5
—	—	—	—	5

CICLO (RIGHE)

CICLO (SPAZIO)

CICLO (NUM)

```
int SPAZIO = 0;
int RIGA = 1;
int COL = 1;
for (RIGA=1; RIGAL=n; RIGA++){
    for (                    ){
```