

```

int i, j;
for(i = 4; i <= 2N; i = i + 4){
    task → t
    for(j = N*N; j >= 1; j = j - 4 ){
        task → m
    }
}

```

Here we have 1 independent loops inside a loop, so solve outer inner loop separately and then multiply both

```

int i, j, k;
for(i = N; i <= N2; i = i * 2){
    task → t
    for(j = N; j >= N/2; j = j - 2 ){
        task → m
    }
    for(k = N2; k <= N3; k = k * 3 ){
        task → m
    }
}

```

Here we have 2 independent loops inside a loop, so solve both inside loops separately, add both, simplify and then multiply with the outer loop complexity

```

int i, j;
for(i = 1; i <= N3; i = i * 3){
    task → t
    for(j = i; j >= 1; j = j - 3){
        task → b
    }
}

```

Here we have 1 dependent loops inside a loop, so solve outer loop separately, for inner loop, for every value of i, form a separate loop for j and then form the series and calculate its complexity, at the end add both

```

int i, j;
for(i = 1; i <= N; i = i * 3){
    task → m
    for(j = i*i; j <= N*N; j = j + 3){
        task → z
    }
}

```

Here we have 1 dependent loops inside a loop, so solve outer loop separately, for inner loop, for every value of i, form a separate loop for j, while forming a j loop keep a careful eye how you will form that loop, and then form the series and calculate its complexity, at the end add both

```
int i, j;  
for(i = 1; i <= N; i = i + 3){  
    task → t  
    for(j = 1; j <= i; j = j + 4){  
        task → b  
    }  
    for(k = i; k <= 3N; k = k + 3 ){  
        task → m  
    }  
}
```

Here we have 2 dependent loops inside a loop, so solve outer loop separately, for inner loops, for every value of i, form a separate loop for j & k, and form separate series for both loops, at the end add outer and inner loops.

```
int i, j;  
for(i = 4N; i >= 1; i = i / 4){  
    task → t  
    for(j = i; j >= 1; j = j - 4){  
        task → m  
    }  
    for(k = 1; k <= N; k = k * 4){  
        task → m  
    }  
}
```

Here we have 1 dependent and 1 independent loop inside a loop, so solve outer loop separately. For independent loop multiply with outer loop complexity, and for dependent loop from the series and add outer and inner dependent and then simplify.