
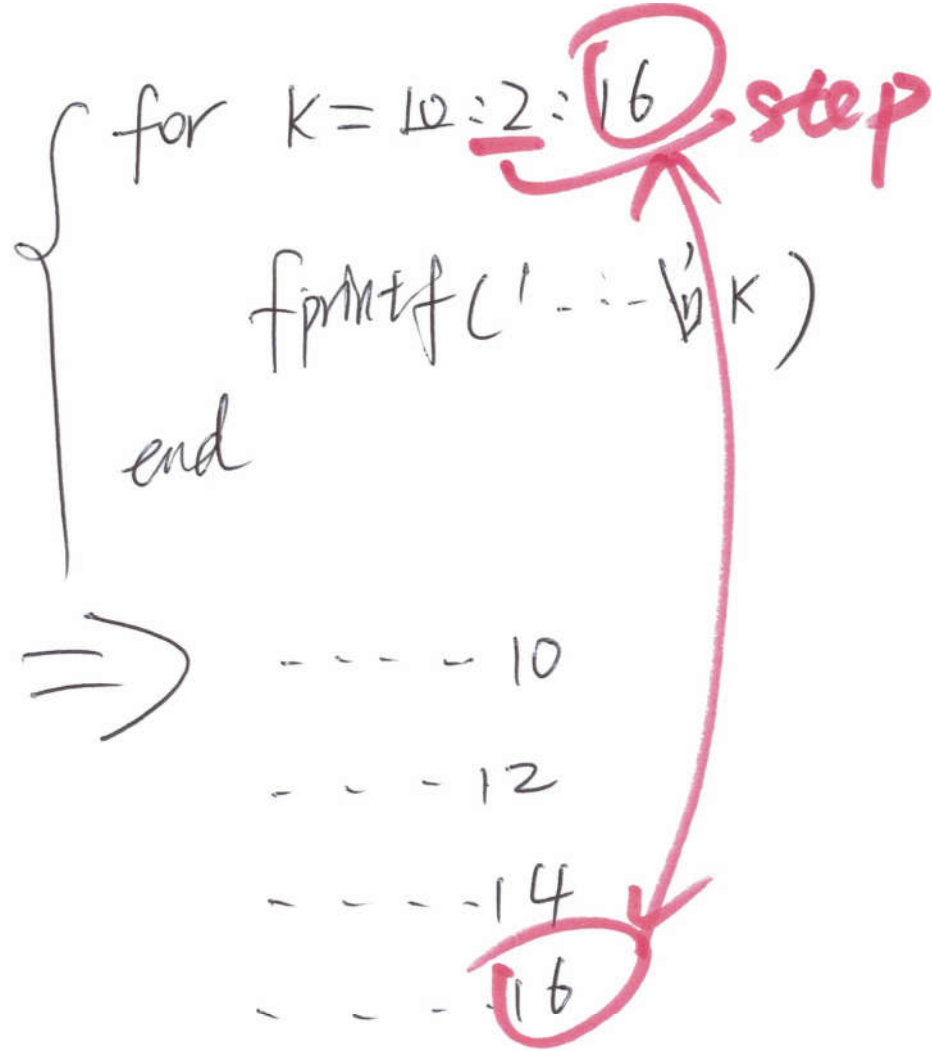


The For Loops

 for k=1..3 1, 2, 3
 fprintf('looping, k=%d\n', k);
end

⇒ looping, k=1
 looping, k=2
 looping, k=3



default
step is:
1

for $k = 1 : 3 : 10$ **No semi-colon**
 $x = k^2$;
fprintf('k, k^2 = %d %d \n', k, x)
end

fprintf('After loop, k = %d \n', k);

⇒

k, k ² =	1	1
k, k ² =	4	16
k, k ² =	9	81
k, k ² =	16	256

After loop k = 10

△ summation using '~~For~~ For Loops'

```
S=0;  
for K=2:2:10  
    S=S+K;  
end
```

⇔ S = sum([2:2:10]);

```
X=[1, 2, 3, 4, 5];
```

```
S=0;  
for i=1:3  
    S=S+(X(i));  
end
```

a vector with an unknown length.

$x = [1, 2, 3, \dots, 1000];$

$s = 0;$

for $i = 1 : \text{length}(x)$
 $s = s + x(i);$
end

Δ average of the vector

$x = [-5 \ 2 \ 4 \ -1 \ 6];$

$s = 0;$ $j = 0;$

for $i = 1 : \text{length}(x)$
if $x(i) > 0 \mid x(i) == 0$
 $s = s + x(i);$ $j = j + 1;$
end
end

average = $s / j;$

clear all
close all

n = input('key, give a number: \n')

```
for k = 1:n  
    S = S + 1/k^2;  
    (Result = sqrt(6*S));  
end
```

```
for k = 1:n  
    S = S + 1/k^2;  
    Result(k) = sqrt(6*S);  
end
```