

Example // Write a program in MATLAB to add numbers from 10-30 using the for statement.

```
>> sum=0  
>> for i=10:30  
>> s = s +i  
>> end  
>> disp('the total sum is =')  
>> disp('sum')
```

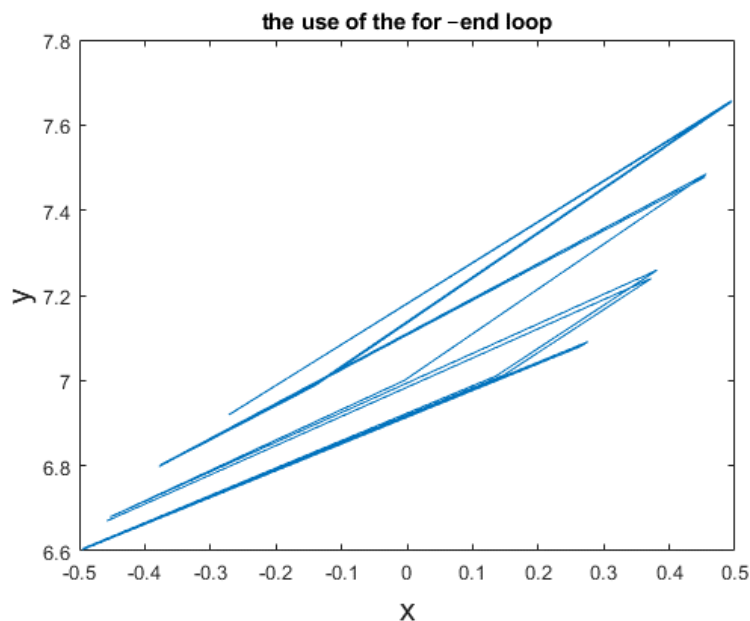
Example // Write a program in MATLAB to find the sum of even numbers between 2 - 49.

```
>> sum=0  
>> for i=4:2:48  
>> sum=sum+i  
>> end  
>> disp('the total sum is =')  
>> disp('sum')
```

Example // Write a program in MATLAB to find the values of (x, y) for numbers from 1-21 using the for statement, then draw the function.

Hint: plot(x,y),  $(x_i) = \sin(i) * \cos(i)$ ,  $(y_i) = 2^{(6*x_i^3)+6}$

```
clear;
clc;
for i= 1 :21
    x(i)=sin(i)*cos(i);
    y(i)=2^(6*x(i)^3)+6;
end
plot (x,y)
fontSize=16;
xlabel('x','FontSize',fontSize);
ylabel('y','FontSize',fontSize);
title ('the use of the for-end loop')
```



Example //: Write a program that adds consecutive (متتالية) numbers of even numbers from zero to 30

```
clear;
clc;
x = input('x=');
S = 0;
for i = 0 : x : 30;
S = S + i
end
disp (S)
```

ملاحظة: اذا disp ثم end يظهر جميع خطوات الجمع بينما end ثم disp المجموع النهائي فقط.

Example //: Write a program to calculate the expansion of the number (n). (مفكوك)

Note // Multiplication counter = 1 and addition counter = 0

```
>> B = 1
>> input ("n=")
>> for I = 2 : n
>> B = B * i
>> end
>> B
```

H.W.

1. Find the sum of the even and odd numbers between the numbers -10 - 99 using the for statement.
2. Write a program to print squared values between 1-10 and then find their sum.
3. Write a program in MATLAB to create a matrix of random numbers and then print only the positive numbers from it.

`A = randn(5,5);`

