```
%Name=Mokshada Pravin Toke
%Class= T.Y.B(72)
% Trapezoidal Method
f=input('enter the function y=f(x)=');
x0=input('Enter the initial limit x0=');
xn=input('Enter the final limit xn=');
n=input('Enter the number of steps=');
h=(xn-x0)/n;
ans=0;
for i=1:n-1
    ans=ans+(f(x0+i*h));
end
ans=2*(ans);
ans1=f(x0)+f(xn);
area=ans+ans1;
area=area*(h/2);
fprintf('Total Area =%f',area);
```

OUTPUT

```
>>trapezoidal72
enter the function y=f(x)=
@(x) (4*x)+(2)
Enter the initial limit x0=
1
Enter the final limit xn=
4
Enter the number of steps=
6
Total Area =36.000000
```