Euler's Method

```
#include<iostream.h>
#include <math.h>
#include<conio.h>
//dy/dx = xy
#define F(x,y)  (x)*(y)
void main()
{
  double y1,y2,x1,a,n,h;
  int j;
  cout<<"\nEnter range values: ";
  cin>>a>>n;
  cout<<"\nEnter the value of y1: ";
  cin>>y1;
  cout<<"\n\nEnter the h: ";
  cin>>h;
  cout<<"\n\n  y1 = "<<y1;
  for(x1=a,j=2; x1<=n+h; x1=x1+h,j++)
  {
   y2= y1 + h * F(x1,y1);
   cout<<"\n\n  x = "<<x1<<" => y"<<j<<"="<<y2;
   y1=y2;
  }
getch();
}

/*
 OUT PUT
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Enter the value of range: 1 1.5

Enter the value of y1: 5


Enter the h: 0.1


  y1 = 5.000

  x = 1.000 => y2 = 5.500

  x = 1.100 => y3 = 6.105

  x = 1.200 => y4 = 6.838

  x = 1.300 => y5 = 7.726

  x = 1.400 => y6 = 8.808

  x = 1.500 => y7 = 10.129

*/
```