C:\Users\al-akween\Desktop\Untitled.png

**The numerical integral**

1. Trapezoidal Method :- طريقة شبه المنحرف

Suppose that is given over and we wont to estimate the integral of over , first we divide into sub- interval of equal length s.t

Now , we apply the following equation to each sub-interval [ for

Therefore we will have :

i.e.

**Ex:-**

Apply trapezoidal rule to the integration of between the argument 1.00 to 1.30 s.t h=0.05 use five digit

**OR** find by using trapezoidal rule , h= 0.05

Sol:

X

1.00 1.00000

1.05 1.02470

1.10 1.04881

1.15 1.07238

1.20 1.09544

1.25 1.11803

1.30 1.14017

2(1.09544)+2(1.11803) + 1.14017 )

0.32145

H.W. : Use trapezoidal method to find the following integrals : -

1. , n= 4
2. when n=2 & n= 4
3. , n= 4