**Task № 4**

**(Calculation of the integral using OpenMP)**

Statement of the problem.

 (1)

Solve the definite integral (1) by trapezoid method with number of elements (dx) equals to N = 106.

**The task:**

**1) Compute the value of the integral using a shared variable into which several threads write their calculation results. Provide access to the shared variable through a critical section.**

**2) Plot the dependence of the speedup S on the number of threads *p (*where *p = 1, 2, 4, 8, 12, 16)*.**