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/*
A program to calculate the integration of Sin(x) using Simpson rule.
This program is created by Mohammad Sazzad Hossain.
*/
  # include <iostream.h>
  # include <math.h>
     double f (double x){return (\sin(x));}
     double simpson (double low, double up);
  int main(){
     double low, up, pi;
     pi = 4 * atan (1);
     low = 0; up = pi / 2;
  cout << "The result is: " << simpson(low, up) << endl;</pre>
  cout << "With the error of the order 1e-6." << endl;
  return 0;
     double simpson (double low, double up){
     double s = 0, h = 0.000001;
  do {
     s += h * (5 * f(low) + 8 * f(low - h) - f(low - 2 * h)) / 12;
     low += h;
   } while(low <= (up));
  return s;
```