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// File: fallMeters.cpp
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/*Compute the distance an object falls */

#include <iostream>
using namespace std;

int main()
{
  double g = 32.185;      //32.185 feet per second^2
  double t;               //time (in seconds)
  double velocity;        //velocity after time t
  double distance;        //distance after time t
  double ratio = 0.3048;  //ratio of meters over feet

  cout << "Enter the time: ";
  cin >> t;

  // compute the velocity and distance
  velocity = g * t * ratio;
  distance = (0.5) * velocity * t;

  cout << "After " << t << " seconds, the velocity is "
       << velocity << " meters per second." << endl;
  cout << "After " << t << " seconds, the falling distance is "
       << distance << " meters." << endl;

  return (0);
}
```