

The screenshot shows a C++ IDE with the following components:

- Projects Panel:** Shows a project named "Gaddis\_9Ed\_Chap2\_Prob20\_HowMuchPaint" with subfolders for Header Files, Resource Files, Source Files, Test Files, and Important Files. The file "HowMuchPaint.cpp" is selected in the Source Files folder.
- Source Code Editor:** Displays the source code for "HowMuchPaint.cpp". The code includes comments about the file, author, creation date, and purpose. It uses the `iostream` library and the `std` namespace. The `main` function initializes variables for paint coverage, fence height, fence length, and the number of gallons required. It calculates the surface area, the number of gallons needed (including a 1-gallon buffer), and displays the results using `cout`.
- Navigator:** Shows the `main` function as the active item.
- Output Window:** Displays the output of the program, showing the calculated values for fence height, fence length, paint coverage, and the number of gallons required. The output is: "Fence Height = 6 feet.", "Fence Length = 100 feet.", "Paint Coverage = 340 feet^2.", and "Number of Gallons of Paint Required = 8 gallons". The output window also shows "RUN SUCCESSFUL (total time: 703ms)".

```
1  /*
2  * File:   HowMuchPaint.cpp
3  * Author: Kevin Morris
4  * Created on June 23, 2022, 10:50 AM
5  * Purpose: Paint Problem - How many Gallons for double Coverage and both
6  *          sides of the fence.
7  */
8  //System Libraries
9  #include <iostream>
10 using namespace std;
11 //User Libraries
12 //Global Constants
13 //Mathematical/Physics/Conversions, Higher dimensioned arrays
14 //Function Prototypes
15 //Execution Begins Here
16 int main(int argc, char** argv) {
17     // Initialize the Random Number Seed
18     //Declare Variables
19     float pCvg;//Coverage of a gallon of paint ft^2
20     fncHgt;// Fence Height in ft
21     fncLen;//Fence Length in ft
22     int nGalns;//Number of Gallons of paint required
23     //Initialize Variables
24     pCvg=3.4e2f;//340 square feet
25     fncHgt=6.0e0f;//6 foot high fence
26     fncLen=1.0e2f;//100 foot long fence
27     //Map inputs to outputs-> The Process
28     float srfAra=fncHgt*fncLen;//Surface area of 1 side of fence
29     float srfCov=2*2*srfAra;//Need to paint both sides twice
30     nGalns=srfCov/pCvg+1;//Integer number of Gallons of Paint
31     //Display Results
32     cout<<"Fence Height   = " <<fncHgt<<"      feet."<<endl;
33     cout<<"Fence Length   = " <<fncLen<<"      feet."<<endl;
34     cout<<"Paint Coverage = "<<pCvg<<"      feet^2."<<endl;
35     cout<<"Number of Gallons of Paint Required = "<<nGalns<<" gallons"<<endl;
36     //Exit stage right
37     return 0;
38 }
```

Output - Gaddis\_9Ed\_Chap2\_Prob20\_HowMuchPaint (Run) X

```
Fence Height   = 6      feet.
Fence Length   = 100    feet.
Paint Coverage = 340    feet^2.
Number of Gallons of Paint Required = 8 gallons
RUN SUCCESSFUL (total time: 703ms)
```