**Computer Programming Home Tasks**

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Section: B

#include <iostream>

#include <cmath>

using namespace std;

int main () {

//Factorial of 6

int num = 6;

cout<<"Factorial of 6 is: ";

cout<<num\*(num-1)\*(num-2)\*(num-3)\*(num-4)\*(num-5)<<endl;

//Distance between two points

float x1, x2, y1, y2;

cout<<"x coordinate of point 1: ";

cin>>x1;

cout<<"y coordinate of point 1: ";

cin>>y1;

cout<<"x coordinate of point 2: ";

cin>>x2;

cout<<"y coordinate of point 2: ";

cin>>y2;

float x = x2-x1;

float y = y2-y1;

//Distance formula given in task is incorrect, it should include

//square root of whole formula

cout<<"Distance: "<<pow((x\*x)+(y\*y),0.5)<<endl;

//Convert into meters and kilometers

float cm, m, km;

cout<<"Length in centimeters(cm): ";

cin>>cm;

m = cm/100;

km = m/1000;

cout<<"Length in meters: "<<m<<endl;

cout<<"Length in kilometers: "<<km<<endl;

//Calculate Polynomial a^2 + 2ab + b^2

float a, b;

cout<<"Value of a: ";

cin>>a;

cout<<"Value of b: ";

cin>>b;

cout<<"Result of the Polynomial: "<<(a\*a)+(2\*a\*b)+(b\*b)<<endl;

return 0;

}