

Code:

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#include <iostream>
#include <string>
#include <sstream>
#include <cmath>

using namespace std;

int main(){

    double M,P,Q,A,B;
    cout<<"My'' + Py' + Qy = Ax +B"<<endl;
    cout<<"Enter M: ";
    cin>>M;

    cout<<"Enter P: ";
    cin>>P;

    cout<<"Enter Q: ";
    cin>>Q;

    cout<<"Enter A: ";
    cin>>A;

    cout<<"Enter B: ";
    cin>>B;

    cout<<"\n";

    double a=A/(float)Q;
    double b=(B-(P*a))/Q;

    double root1, root2;
    root1 = (-P + sqrt(pow(P,2) - (4*M*Q)))/(2*M);
    root2 = (-P - sqrt(pow(P,2) - (4*M*Q)))/(2*M);

    cout<<"Solution: c_1 e^(" << root1 << ")t + c_2 e^(" << root2 << "t) + (" <<
a << ")x + (" << b << ")"<<endl;
    cout<<"y = "<<a<<"x + "<<b<<endl;
    cout<<"y' = "<<b<<endl;
    cout<<"y'' = 0"<<endl;
```

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}
```

Output:

```
C:\Users\E1-432 PC\Documents\CPE 010>g++ DE.cpp  
C:\Users\E1-432 PC\Documents\CPE 010>a.exe  
My'' + Py' + Qy = Ax +B  
Enter M: 1  
Enter P: 3  
Enter Q: 2  
Enter A: 4  
Enter B: 2  
  
Solution: c_1 e^(-1)t + c_2 e^(-2t) + (2)x + (-2)  
y = 2x + -2  
y' = -2  
y'' = 0  
C:\Users\E1-432 PC\Documents\CPE 010>
```

