```cpp
#include<iostream>
#include<cstdlib>
#include<cmath>
using namespace std;

class science{
    friend ostream& operator<<(ostream&out, science &sci);
    friend istream& operator>>(istream&in, science &sci);
private:
    double a;
    int n;
public:
    science():a(0), n(0) {}
    science(double a_) : a(a_), n(0) {}
    science(double a_, int n_): a(a_), n(n_){
        if(a!=0)
    {
        while(abs(a)>=10)
        {
            a/=10;
            n+=1;
        }
        while(abs(a)<1)
        {
            a*=10;
            n-=1;
        }
    }
    }
    // Member function declarations
    // ------------- Write Your Code Here ------------- //
    //
    const science operator+(const science&)const;
    const science operator-(const science&)const;
    const science operator*(const science&)const;
    const science operator/(const science&)const;
    science operator=(const science&);
    // ------------------------------------------------ //
};

// Finish the ctor and function definitions
// ------------- Write Your Code Here ----------------- //
//
ostream& operator<<(ostream&out, science &sci){
    if(sci.a!=0)
    {
        while(abs(sci.a)>=10)
        {
            sci.a/=10;
            sci.n+=1;
        }
        while(abs(sci.a)<1)
        {
            sci.a*=10;
            sci.n-=1;
        }
    }
    out<<sci.a<<"*10^"<<sci.n;
    return out;
}
istream& operator>>(istream&in,science &sci){
    in>>sci.a>>sci.n;
    return in;
}
const science science::operator+(const science& rhs) const{
        int i=n-rhs.n;
        return science(pow(10,i)*a+rhs.a,rhs.n);
    }
const science science::operator-(const science& rhs) const{
        int i=n-rhs.n;
        return science(pow(10,i)*a-rhs.a,rhs.n);
    }
const science science::operator*(const science& rhs) const{
        return science(a*rhs.a,n+rhs.n);
    }
const science science::operator/(const science& rhs) const{
        return science(a/rhs.a,n-rhs.n);
    }
science science::operator=(const science& rhs) {
        a=rhs.a;
        n=rhs.n;
        return *this;
    }
int main(){
    science v, t, w;
    char op;
    while(1){
        cout << "Please enter an expression:" << endl << endl;

        cin >> v;

        cin >> op;
        if( op != '+' && op != '-' && op != '*' && op != '/' )break

        cin >> t;
        if(cin.fail()) break;

        switch(op){
            case '+':  w = v + t; break;
            case '-':  w = v - t; break;
            case '*':  w = v * t; break;
            case '/':  w = v / t; break;
        }
        cout<<v<<' '<<op<<' '<<t<<" = "<<w<<endl<<endl;
    }
    return 0;
}
```