#include <iostream>

using namespace std;

class PhanSo

{

private :

int tuso;

int mauso;

public:

PhanSo () { tuso = mauso = 1; };

~PhanSo() {};

void settu ( int a);

void setmau ( int b);

int gettu ();

int getmau ();

};

int PhanSo ::gettu ()

{

return tuso;

}

int PhanSo ::getmau ()

{

return mauso;

}

void PhanSo ::settu( int a)

{

tuso = a;

}

void PhanSo ::setmau( int b)

{

mauso = b;

}

void NhapPhanSo ( PhanSo &ps)

{

cout <<" Nhap vao tu so va mau so: ";

int tuso, mauso;

cin >> tuso >> mauso;

ps.settu ( tuso);

ps.setmau ( mauso);

}

void XetDau ( PhanSo & ps)

{

if ( ps.gettu() < 0)

{

if ( ps.getmau() < 0)

{

ps.settu ( abs(ps.gettu()));

ps.setmau ( abs( ps.getmau()));

}

}

else

if ( ps.getmau() < 0)

{

ps.settu ( -(ps.gettu()));

ps.setmau ( abs( ps.getmau()));

}

}

void XuatPhanSo ( PhanSo ps)

{

XetDau( ps);

if ( ps.getmau() == 0)

cout <<" Loi chia 0\n";

else

cout << ps.gettu() << "/" << ps.getmau();

}

int UCLN ( int a, int b)

{

if ( b == 0)

return a;

else

return UCLN ( b, a % b);

}

void RutGon (PhanSo &ps)

{

int uc = UCLN(ps.gettu(), ps.getmau());

ps.settu(( ps.gettu() / uc));

ps.setmau(( ps.getmau() / uc));

}

PhanSo Tong ( PhanSo ps1, PhanSo ps2)

{

PhanSo kq;

kq.settu( ps1.gettu() \* ps2.getmau() + ps2.gettu() \* ps1.getmau());

kq.setmau( ps1.getmau() \* ps2.getmau());

return kq;

}

PhanSo Hieu ( PhanSo ps1, PhanSo ps2)

{

PhanSo kq;

kq.settu( ps1.gettu() \* ps2.getmau() - ps1.gettu() \* ps2.getmau());

kq.setmau( ps1.getmau() \* ps2.getmau());

return kq;

}

PhanSo Tich ( PhanSo ps1, PhanSo ps2)

{

PhanSo kq;

kq.settu( ps1.gettu() \* ps2.gettu() );

kq.setmau( ps1.getmau() \* ps2.getmau());

return kq;

}

PhanSo Thuong ( PhanSo ps1, PhanSo ps2)

{

PhanSo kq;

kq.settu( ps1.gettu() \* ps2.getmau() );

kq.setmau( ps1.getmau() \* ps2.gettu());

return kq;

}

int main ()

{

PhanSo ps1, ps2, kq;

cout <<" Nhap phan so thu nhat: \n";

NhapPhanSo(ps1);

cout <<" Phan so thu nhat la: ";

XuatPhanSo( ps1);

cout <<" \nNhap phan so thu hai: \n";

NhapPhanSo(ps2);

cout <<" Phan so thu hai la: ";

XuatPhanSo( ps2);

cout << endl;

//cout <<" Tong hai phan so: ";

XuatPhanSo(ps1);

cout << "+";

XuatPhanSo(ps2);

cout <<" = ";

kq = Tong(ps1, ps2);

RutGon(kq);

XuatPhanSo(kq);

cout << endl;

system ("pause");

return 0;

}