#include<iostream>

#include<string>

using namespace std;

void perpostion ( string q, string p,string type)

{

if(type=="implication")

{

cout<<"The implication is ="<<p<<"-->"<<q<<endl;

if(p=="p" && q=="q")

{

cout<<"The converse is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<"-"<<p<<"-->-"<<q<<endl;

cout<<"The contrapositive is="<<"-"<<q<<"-->-"<<p<<endl;

}

else if(p=="-p"&&q=="q")

{

cout<<"The converse is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<p<<"-->-"<<q<<endl;

cout<<"The contrapositive is="<<"-"<<q<<"-->"<<p<<endl;

}

else if(p=="p"&&q=="-q")

{

cout<<"THE converse is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<"-"<<p<<"-->"<<q<<endl;

cout<<"The contrapositive is="<<q<<"-->-"<<p<<endl;

}

else if(p=="-p" && q=="-q")

{

cout<<"The converse is ="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<p<<"-->"<<q<<endl;

cout<<"The contrapositive is="<<q<<"-->"<<p<<endl;

}

}

else if(type=="converse")

{

cout<<"The converse="<<p<<"-->"<<q<<endl;

if(p=="p" && q=="q")

{

cout<<"The implication is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<"-"<<q<<"-->-"<<p<<endl;

cout<<"The contrapositive is="<<"-"<<p<<"-->-"<<q<<endl;

}

else if(p=="-p"&&q=="q")

{

cout<<"The implication is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<q<<"-->-"<<p<<endl;

cout<<"The contrapositive is="<<"-"<<p<<"-->"<<q<<endl;

}

else if(p=="p"&&q=="-q")

{

cout<<"THE implication is="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<"-"<<q<<"-->"<<p<<endl;

cout<<"The contrapositive is="<<p<<"-->-"<<q<<endl;

}

else if(p=="-p" && q=="-q")

{

cout<<"The implication is ="<<q<<"-->"<<p<<endl;

cout<<"The inverse is="<<q<<"-->"<<p<<endl;

cout<<"The contrapositive is="<<p<<"-->"<<q<<endl;

}

}

else if(type=="inverse")

{

cout<<"The inverse="<<p<<"-->"<<q<<endl;

if(p=="p" && q=="q")

{

cout<<"The converse is="<<q<<"-->"<<p<<endl;

cout<<"The implication is="<<"-"<<p<<"-->-"<<q<<endl;

cout<<"The contrapositive is="<<"-"<<q<<"-->-"<<p<<endl;

}

else if(p=="p"&&q=="-q")

{

cout<<"THE converse is="<<q<<"-->"<<p<<endl;

cout<<"The implication is="<<"-"<<p<<"-->"<<q<<endl;

cout<<"The contrapositive is="<<q<<"-->-"<<p<<endl;

}

else if(p=="-p" && q=="-q")

{

cout<<"The converse is ="<<q<<"-->"<<p<<endl;

cout<<"The implication is="<<p<<"-->"<<q<<endl;

cout<<"The contrapositive is="<<q<<"-->"<<p<<endl;

}

else if(p=="-p"&&q=="q")

{

cout<<"The converse is="<<q<<"-->"<<p<<endl;

cout<<"The implication is="<<p<<"-->-"<<q<<endl;

cout<<"The contrapositive is="<<"-"<<q<<"-->"<<p<<endl;

}

}

else if(type=="contrapositive")

{

cout<<"The contrapositive="<<p<<"-->"<<q<<endl;

if(p=="p" && q=="q")

{

cout<<"The inverse is="<<q<<"-->"<<p<<endl;

cout<<"The converse is="<<"-"<<p<<"-->-"<<q<<endl;

cout<<"The implication is="<<"-"<<q<<"-->-"<<p<<endl;

}

else if(p=="-p"&&q=="q")

{

cout<<"The inverse is="<<q<<"-->"<<p<<endl;

cout<<"The converse is="<<p<<"-->-"<<q<<endl;

cout<<"The implication is="<<"-"<<q<<"-->"<<p<<endl;

}

else if(p=="-p" && q=="-q")

{

cout<<"The inverse is ="<<q<<"-->"<<p<<endl;

cout<<"The converse is="<<p<<"-->"<<q<<endl;

cout<<"The implication is="<<q<<"-->"<<p<<endl;

}

else if(p=="p"&&q=="-q")

{

cout<<"THE innverse is="<<q<<"-->"<<p<<endl;

cout<<"The converse is="<<"-"<<p<<"-->"<<q<<endl;

cout<<"The implication is="<<q<<"-->-"<<p<<endl;

}

}

else

{

cout<<"Enter the correct entry";

}

}

int main()

{

string p,q,type;

cout<<"Enter the type of the preposition=";

cin>>type;

cout<<"Enter the preposition e.g(use '-' for negation ";

cin>>p>>q;

perpostion(p,q,type);

return 0;

}



