Tich := proc (A, B);

local mA, nA, mB, nB, i, j, k, AB;

mA := nops(A);

nA := nops(A[1]);

mB := nops(B);

nB := nops(B[1]);

if nA <> mB then

print("Khong tim tich duoc");

return false;

fi;

AB := [seq([seq(0, i = 1 .. nB)], j = 1 .. mA)];

for i to mA do

for j to nB do

for k to nA do

AB[i, j] := AB[i, j]+A[i, k]\*B[k, j];

od;

od;

od;

return AB;

end proc;

BacThang := proc (X);

local A, m, n, i, j, k, d, dA, kt;

A := X; m := nops(A);

n := nops(A[1]);

i := 1;

j := 1;

while i <= m and j <= n do

if A[i, j] <> 0 then

for k from i+1 to m do

A[k] := A[k]-A[k, j]/A[i, j].A[i];

od;

i := i+1;

j := j+1;

else

kt := false;

for d from i+1 to m do

if A[d, j] <> 0 then

kt := true;

dA := A[i];

A[i] := A[d];

A[d] := dA;

break;

fi;

od;

if kt = false then

j := j+1;

fi;

fi;

od;

return A ;

end proc;

BacThangRG := proc (X);

local A, m, n, i, j, k, d, dA, kt;

A := X; m := nops(A);

n := nops(A[1]);

i := 1;

j := 1;

while i <= m and j <= n do

if A[i, j] <> 0 then

A[i] := A[i]/A[i, j];

for k from 1 to m do

if k<>i then

A[k] := A[k]-A[k, j]/A[i, j].A[i];

fi;

od;

i := i+1;

j := j+1;

else

kt := false;

for d from i+1 to m do

if A[d, j] <> 0 then

kt := true;

dA := A[i];

A[i] := A[d];

A[d] := dA;

break;

fi;

od;

if kt = false then

j := j+1;

fi;

fi;

od;

return A ;

end proc;

NghichDao := proc (X);

local A,E, m, n, i, k, d, dA, kt,dE;

A := X;

m := nops(A);

n := nops(A[1]);

if m<>n then

printf("Khong phai ma tran vuong");

fi;

i := 1;

E:=[seq([seq(0,i=1..n)],i=1..n)];

for i from 1 to n do

E[i,i]:=1;

od;

i:=1;

while i <= m do

if A[i, i] <> 0 then

E[i] :=E[i]/A[i,i];

A[i] := A[i]/A[i, i];

for k from 1 to m do

if k<>i then

E[k] := E[k]-A[k, i].E[i];

A[k] := A[k]-A[k, i].A[i];

fi;

od;

i := i+1;

else

kt := false;

for d from i+1 to m do

if A[d, i] <> 0 then

kt := true;

dA := A[i];

A[i] := A[d];

A[d] := dA;

dE := E[i];

E[i] := E[d];

E[d] := dE;

break;

fi;

od;

if kt = false then

printf("Ma tran khong kha nghich");

return false;

fi;

fi;

od;

return E ;

end proc;