```
% elim_col.m  8-nov-04
% eliminate a list of columns from a matrix

function Bnew = elim_col(B,col_list);
[m,n]=size(B);
[p,q]=size(col_list);
nelim=max([p q]);
newcol=n-nelim;
if(newcol<1)
  disp('trying to eliminate too many columns');
  pause
  end

Bnew=zeros(m,newcol);
ii=1;
for i=1:n
  ok=1;
  for j=1:nelim
    if(col_list(j) == i)
      ok=0;
      end
    end

  if(ok == 1)
    Bnew(:,ii)=B(:,i);
    ii=ii+1;
    end
  end
```

```
% ins_zerv.m  8-nov-04
% insert zeros into a vector

function del2 = ins_zerv(del,col_list);
[m,n]=size(del);
orig_size=max([m n]);
[p,q]=size(col_list);
nadd=max([p q]);
newdim=orig_size + nadd;

del2=zeros(newdim,1);
ii=1;
for i=1:newdim
  ins=0;
  for j=1:nadd
    if(col_list(j) == i)
      ins=1;
      end
    end

  if(ins == 1)
    del2(i)=0;
  else
    del2(i)=del(ii);
    ii=ii+1;
    end

  end
```

```
% ins_zerm.m  8-nov-04
% insert zero rows & cols into a square matrix

function Ni3 = ins_zerm(Ni,col_list);
[m,n]=size(Ni);
orig_size=m;
[p,q]=size(col_list);
nadd=max([p q]);
newdim=orig_size + nadd;

Ni2=zeros(newdim,orig_size);

% first the rows
ii=1;
for i=1:newdim
  ins=0;
  for j=1:nadd
    if(col_list(j) == i)
      ins=1;
      end
    end

  if(ins == 1)
    Ni2(i,:)=zeros(1,orig_size);
  else
    Ni2(i,:)=Ni(ii,:);
    ii=ii+1;
    end
  end

Ni3=zeros(newdim,newdim);

% now the cols
ii=1;
for i=1:newdim
  ins=0;
  for j=1:nadd
    if(col_list(j) == i)
      ins=1;
      end
    end

  if(ins == 1)
    Ni3(:,i)=zeros(newdim,1);
  else
    Ni3(:,i)=Ni2(:,ii);
    ii=ii+1;
    end
  end
```