```
% ChemE 7770 PS3 #2 Check Balance
%bound=xlsread('SMatrix.xlsx','S','H2:V19');
%Z=transpose(Element)*bound

S=xlsread('SMatrix.xlsx','S','B2:V19');
Element=xlsread('SMatrix.xlsx','Elements');
Rxn=xlsread('SMatrix.xlsx','S','B2:G19'); %checek balance on the 6 rxn
X=transpose(Element)*Rxn; %Inside the box
Y=transpose(Element)*S; % Outside the box
display(X);
display(Y);
% Internal reactions are balanced.
```

```
X =

     0     0     0     0     0     0
     0     0     0     0     0     0
     0     0     0     0     0     0
     0     0     0     0     0     0
     0     0     0     0     0     0
     0     0     0     0     0     0
```

```
Y =

  Columns 1 through 13

     0     0     0     0     0     0     1     4    -4    -1    10
-10     0
     0     0     0     0     0     0     4     7    -4    -4    16
-14    -4
     0     0     0     0     0     0     1     1     0    -2     5
-5     0
     0     0     0     0     0     0     5     4    -4    -1    13
-7    -7
     0     0     0     0     0     0     1     0     0     0     3
-1    -2
     0     0     0     0     0     0     0     0     0     0     0
 0     0

  Columns 14 through 21

     0    21     0     0     0   -21     0     0
    -3    30     1     0     0   -29     2    -2
     0     7     0     0    -1    -7     0     0
    -4    17     0     2    -1   -17     1    -1
    -1     3     0     0     0    -3     0     0
     0     0     0     0     0     0     0     0
```

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