## Graph Summary examples in SAS

This example defines two different graphs and computes summary statistics on both. The first summary call utilizes the graph below. The second call creates a graph consisting of $5 \mathrm{~K}_{1} \mathrm{~s}, 2$ $\mathrm{K}_{2} \mathrm{~S}, 1 \mathrm{~K}_{3}$ and $1 \mathrm{~K}_{4}$.

data summary_example;
input from \$ to \$ ;
datalines;
12
14
23
25
34
45
56
67
68
69
610
89
810
910
1011
1012
1112
;
proc optgraph
data_links = summary_example
out_nodes = NodeSetOut1
out_links = LinkSetOut1;
summary
concomp
out = Summary1;
run;

```
* Create graph with 5K1s, 2 K2s, 1K3 and 1 K4;
data vertices;
input node $ @@;
datalines;
A BCDEFGHI JKLMNOP
;
data edges;
input from $ to $ @@;
datalines;
A B
C D
E F
F G
G E
H I
H J
H K
I J
I K
J K
;
proc optgraph
data_nodes = vertices
data_links = edges
out_nodes = NodeSetOut2
out_links = LinkSetOut2 ;
summary
concomp
out = Summary2;
run;
```

