**Q1 (a)**

**Output:**

**Four force quantities and condition numbers:**

n max\_force min\_force abs\_dia abs\_tophori cond\_num

2 731.11 -516.98 731.11 648.15 17.31

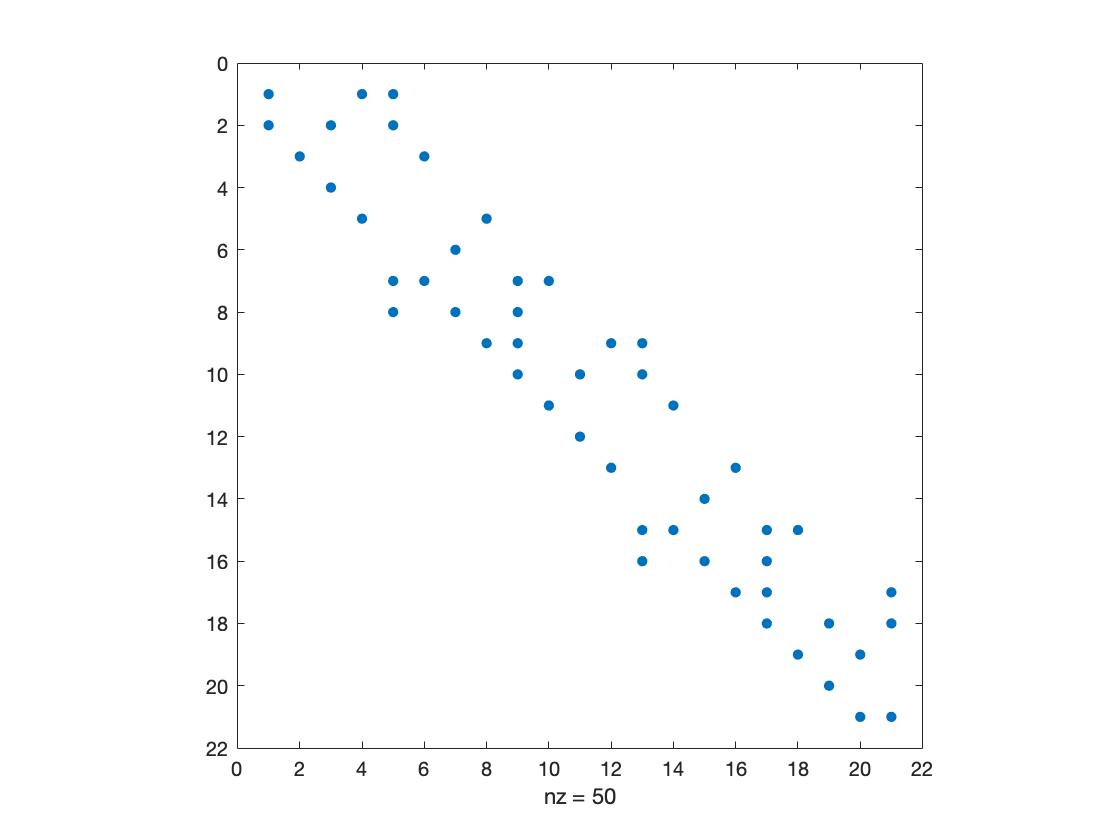
4 840.00 -885.00 708.52 840.00 40.28

8 1402.68 -1393.18 702.18 1402.68 90.71

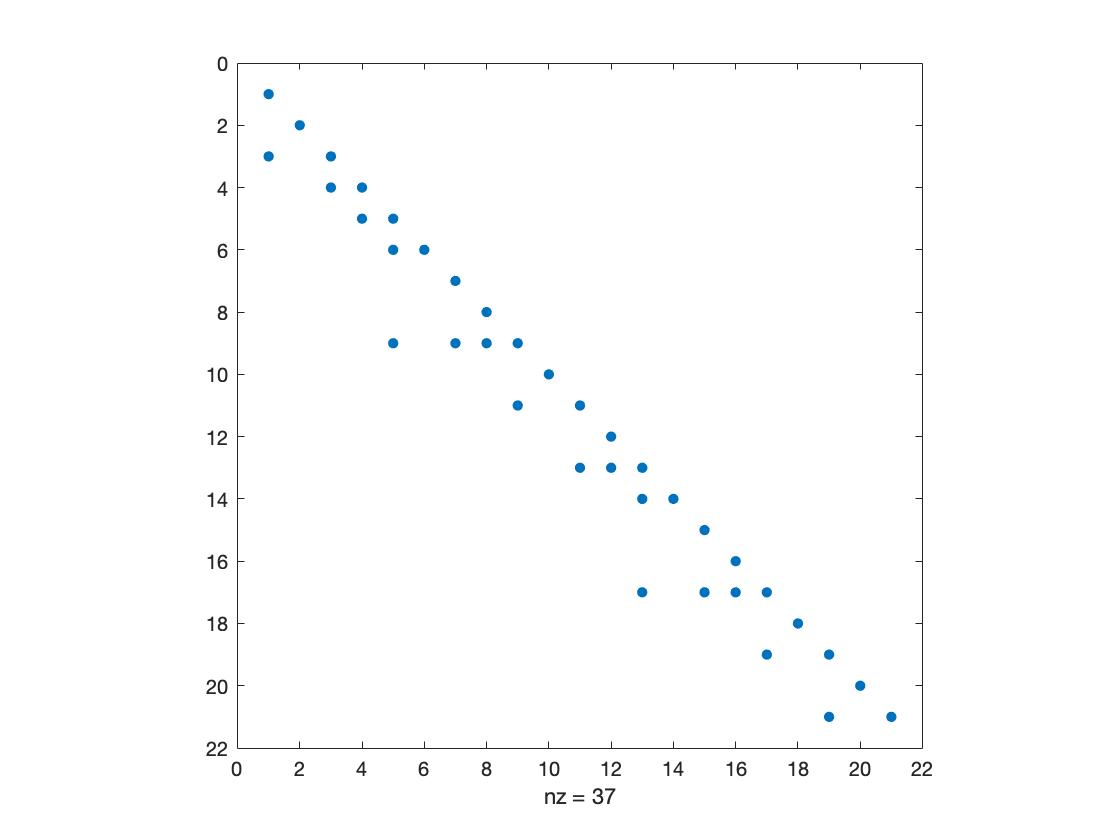
16 2468.48 -2428.38 702.54 2468.48 267.93

**n=4:**

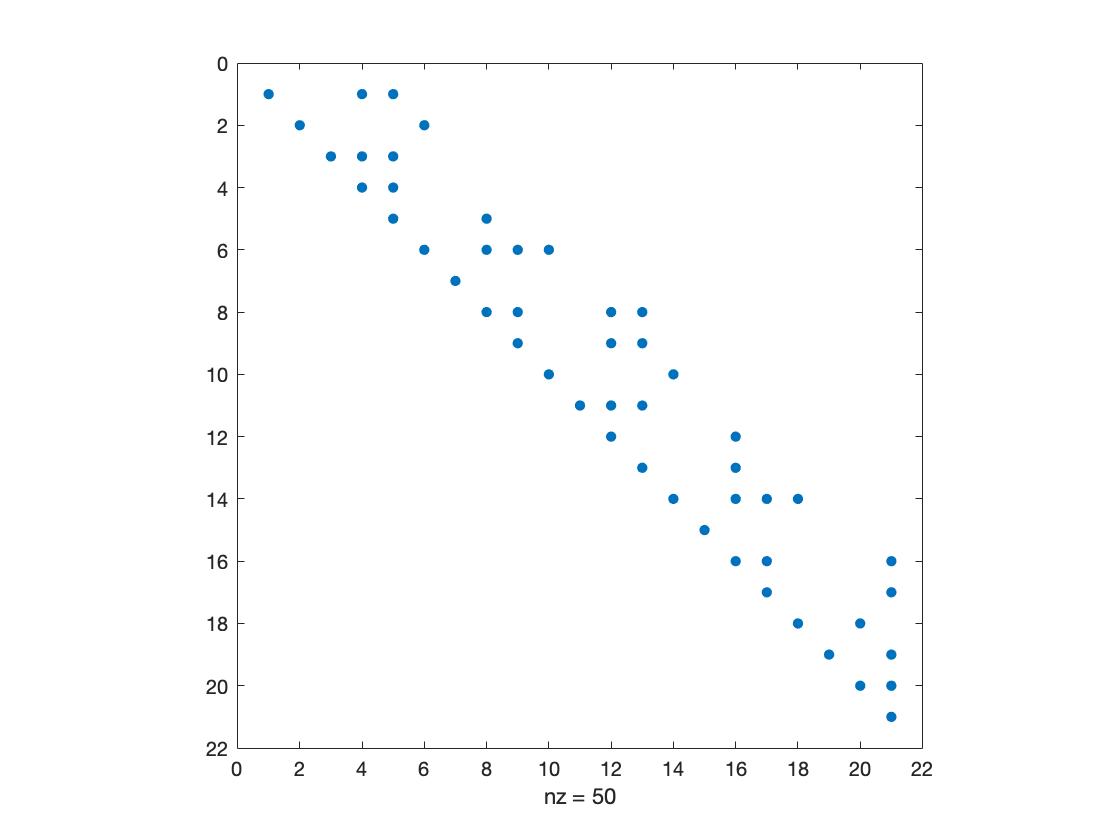
**spy(A)**



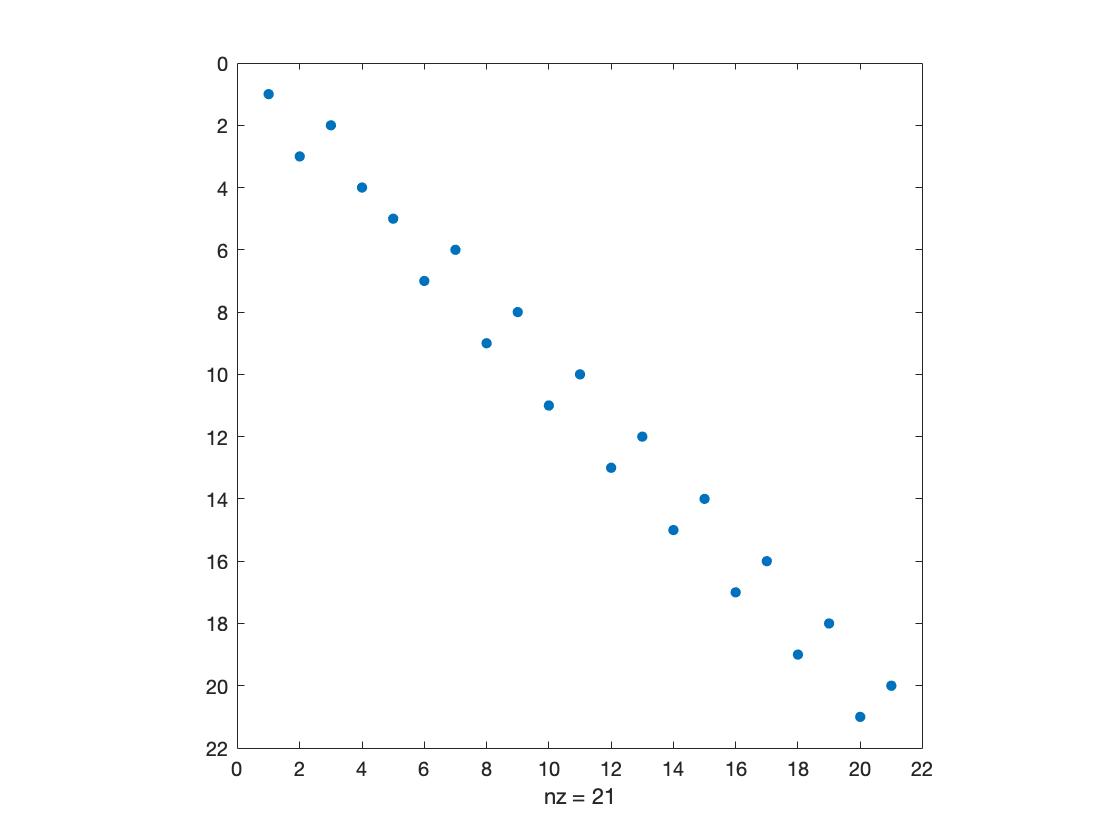
**spy(L)**



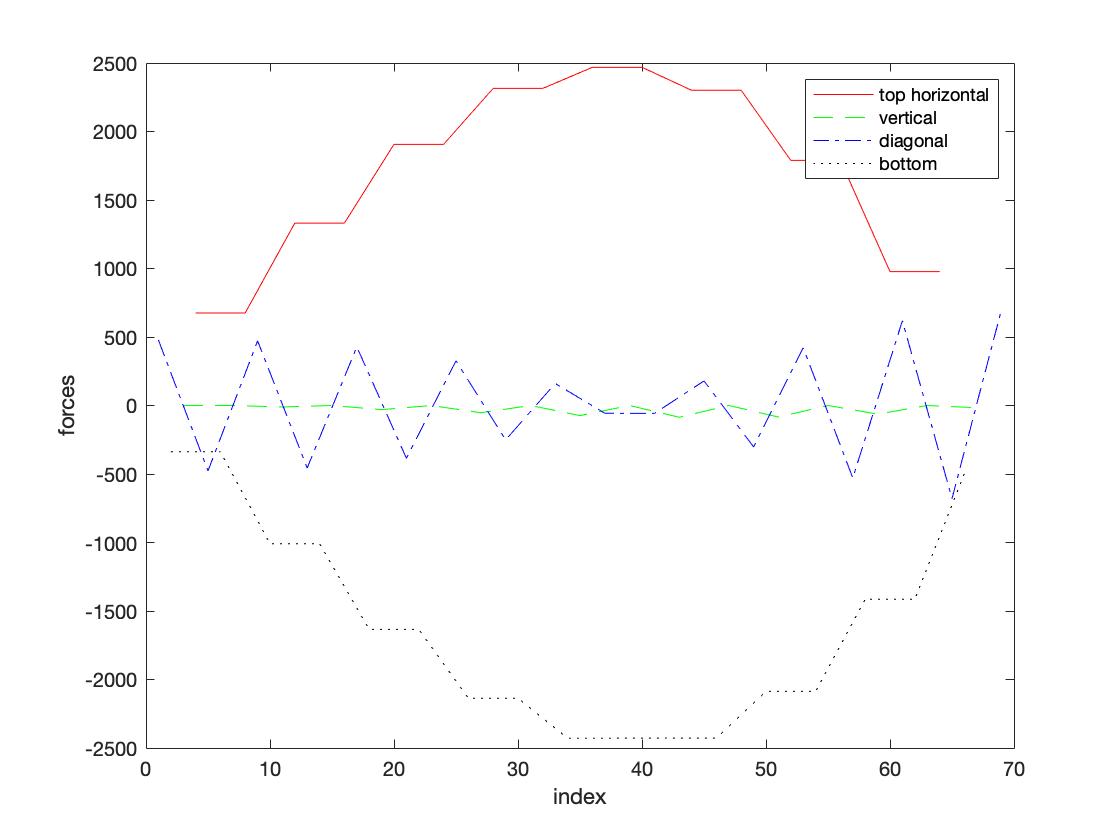
**spy(U)**



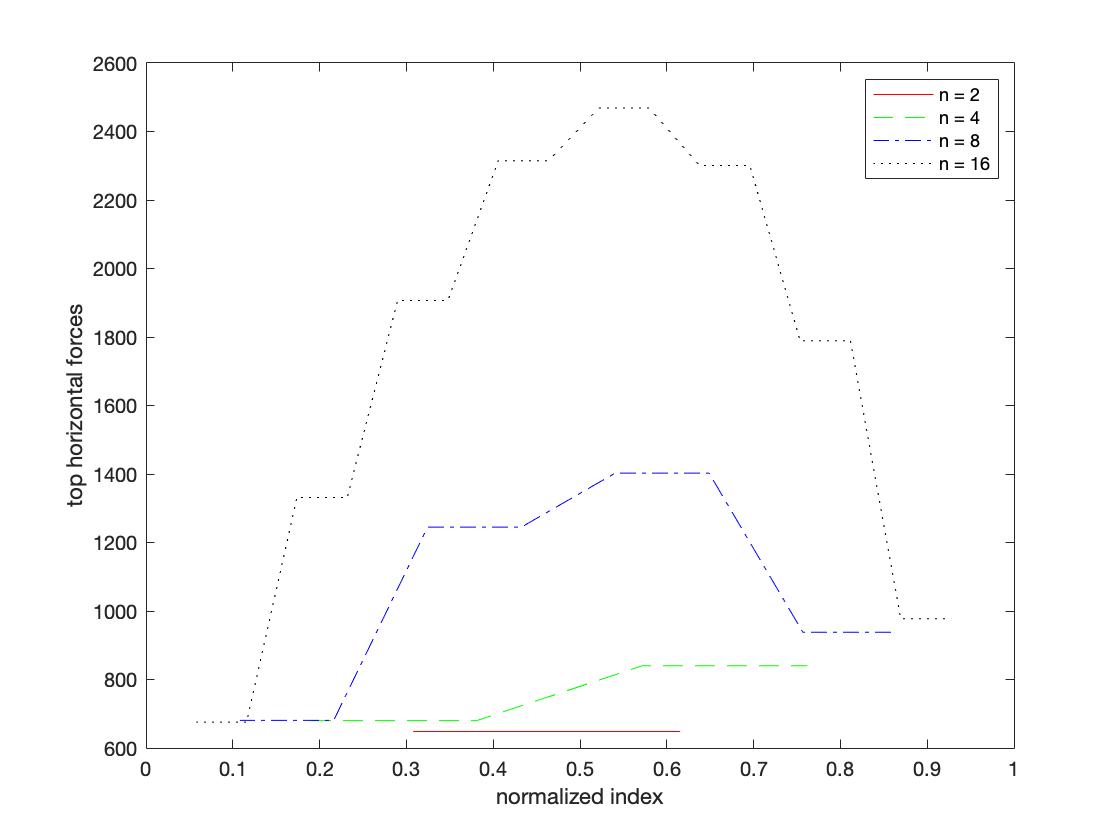
**spy(P)**



**n=16 plot:**

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**Top horizontal members’ forces:**

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