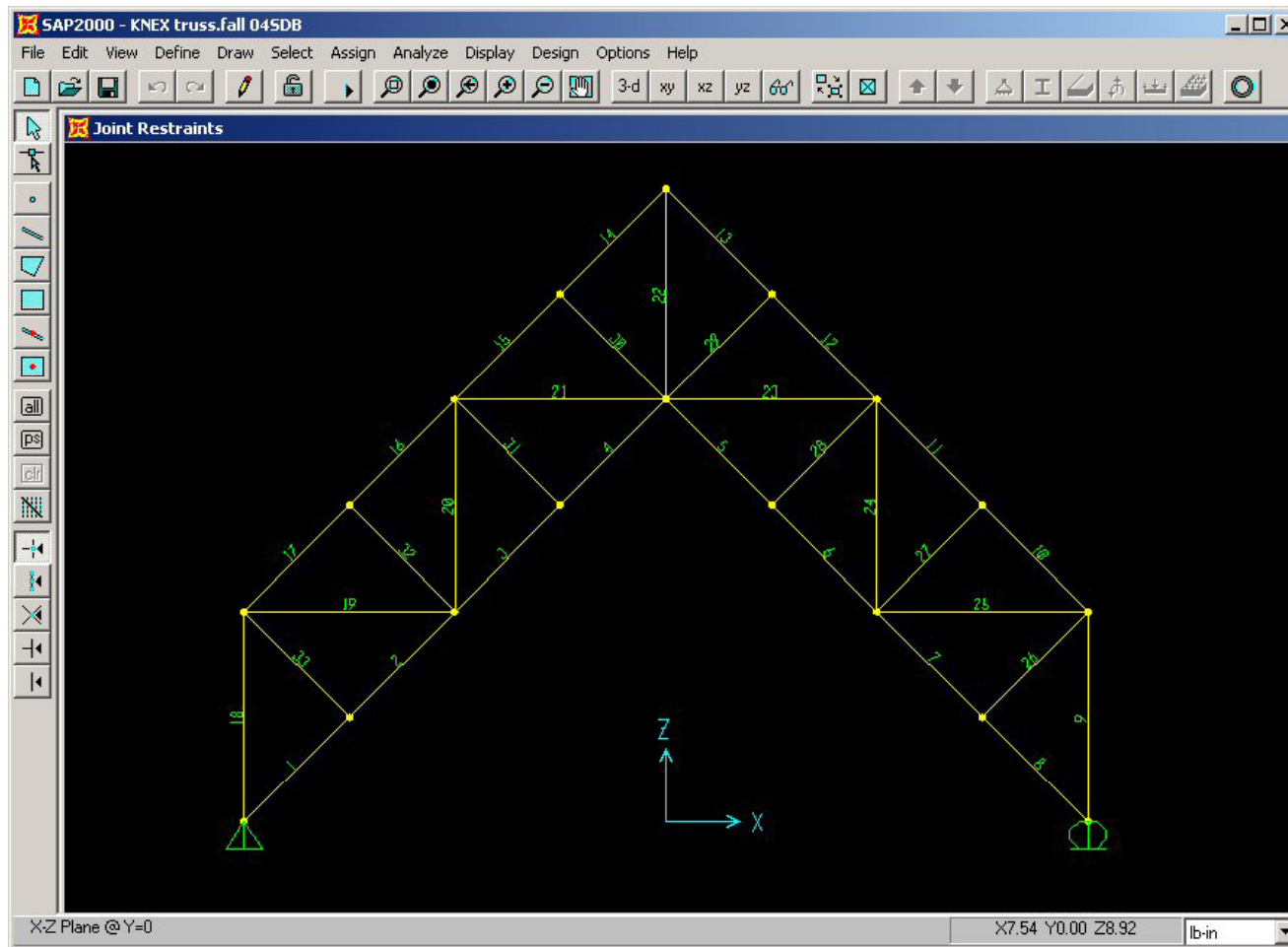


# Project #1 - K'NEX Truss

- Apply Design Strategy to K'NEX Truss



# Project #1 - K'NEX Truss

- Apply Design Strategy to K'NEX Truss

Member	L (in)	F	$P_{cr}$ (lb)	Mode	S (lb)
1	3.01	0.00		1	
2	3.01	0.00		1	
3	3.01	0.35	15.00	1	42.4
4	3.01	0.35	15.00	1	42.4
5	3.01	0.35	15.00	1	42.4
6	3.01	0.35	15.00	1	42.4
7	3.01	0.00		1	
8	3.01	0.00		1	
9	4.25	-0.25	-18.13	2	72.5
10	3.01	-0.35	-36.26	1	102.5
11	3.01	-0.35	-36.26	1	102.5
12	3.01	-0.71	-36.26	1	51.3
13	3.01	-0.71	-36.26	1	51.3
14	3.01	-0.71	-36.26	1	51.3
15	3.01	-0.71	-36.26	1	51.3
16	3.01	-0.35	-36.26	1	102.5

Mode	$T_f$ (lb)
1	15
2	20
3	25

# Project #1 - K'NEX Truss

- Apply Design Strategy to K'NEX Truss

Member	L (in)	F	$P_{cr}$ (lb)	Mode	S (lb)
17	3.01	-0.35	-36.26	1	102.5
18	4.25	-0.25	-18.13	2	72.5
19	4.25	0.25	25.00	3	100.0
20	4.25	-0.25	-18.13	3	72.5
21	4.25	0.25	25.00	3	100.0
22	4.25	0.50	25.00	3	50.0
23	4.25	0.25	25.00	3	100.0
24	4.25	-0.25	-18.13	3	72.5
25	4.25	0.25	25.00	3	100.0
26	3.01	0.00		1	
27	3.01	0.00		1	
28	3.01	0.00		1	
29	3.01	0.00		1	
30	3.01	0.00		1	
31	3.01	0.00		1	
32	3.01	0.00		1	

Mode	$T_f$ (lb)
1	15
2	20
3	25

# Project #1 - K'NEX Truss

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- Apply Design Strategy to K'NEX Truss
  - The maximum load is the minimum failure force or 42.41 lbs (19,241.4 grams)
  - An estimate of the weight and costs are computed as: 185 grams and \$4,720 K'NEX dollars
  - Therefore the *SWR* is: 104