



























































































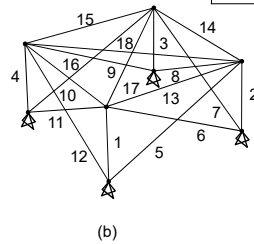
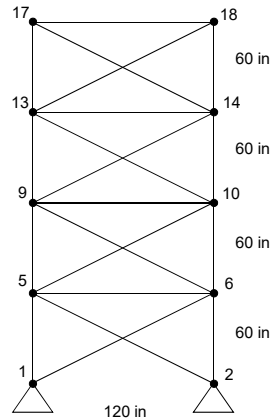






**Homework Problems**

c) For the 72-bar truss shown below, determine the displacements and elemental stresses. Nodes 1, 2, 3, and 4 are pin connections. Let  $E = 10^7 \text{ psi}$  and the  $A = 1.0 \text{ in}^2$  for the first two stories and  $A = 0.5 \text{ in}^2$  for the top two stories. Table 3 lists the values and directions of the two loads cases applied to the 72-bar space truss.



Case	Node	$F_x$ (kip)	$F_y$ (kip)	$F_z$ (kip)
1	17	0.0	0.0	-5.0
	18	0.0	0.0	-5.0
	19	0.0	0.0	-5.0
	20	0.0	0.0	-5.0
2	17	5.0	5.0	-5.0

Note: 1 kip = 4.45 kN

**End of Chapter 3b**