Trusses = remove members need to maintain stability and triangulation

-75

50 30.4 -10.6

75

N

75 50 50 50 75

75

-0.707 f_{11} f_{21}

-0.707 -0.707

-0.707

n_1

-0.707

f_2 f_{22} 1 0

-0.707

-0.707 -0.707 -0.707

n_2

$$1 \cdot \Delta = \Sigma n \cdot \frac{NL}{EA}$$

f_{11} = deflection along 1 due to force at 1

Member	L	N	n_1 for Δ_1	n_2 f_2, Δ_2	Δ_1 nNL	Δ_2 nNL	f_{11} $n_1 n_1 L$	f_{12} $n_1 n_2 L$	f_{21} $n_2 n_1 L$	f_{22} $n_2 n_2 L$
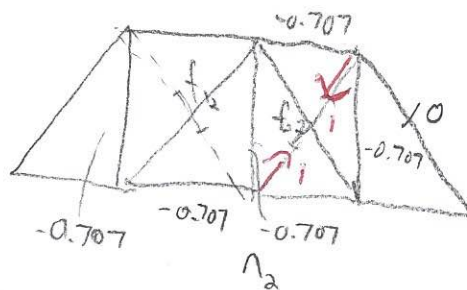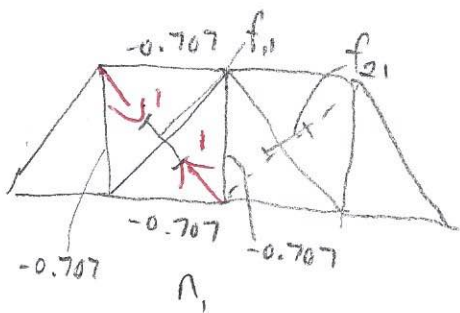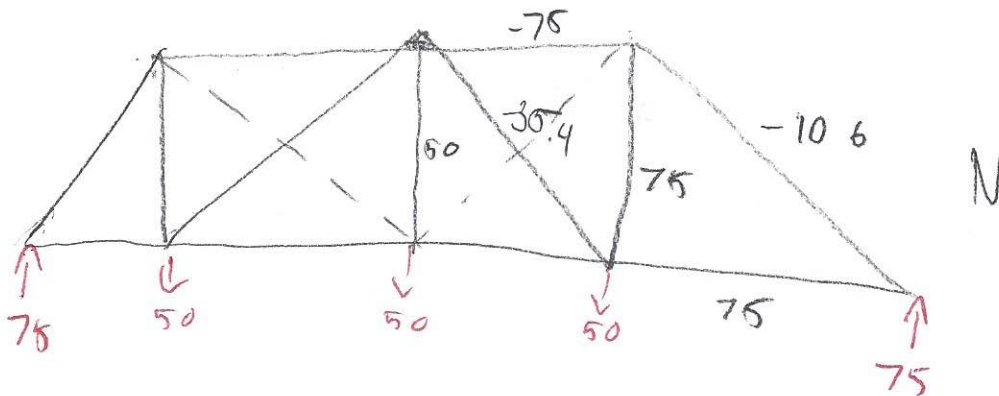
$$\Delta_1 + f_{11} X_1 + f_{12} X_2 = 0$$

$$\Delta_2 + f_{21} X_1 + f_{22} X_2 = 0$$

$X_2 = X_1 = 2 \text{ or } 3 kN$

Other members, $F = N + n_1 X_1 + n_2 X_2$