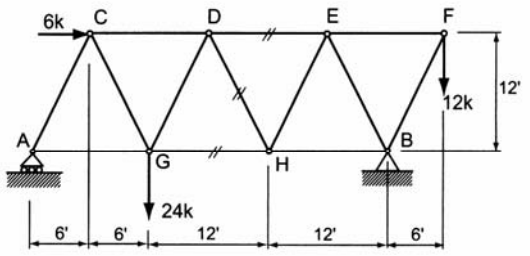
ENDS 231. Assignment #4

Date: 6/7/06, *due 6/14/06* *Worth 25 pts.*

Problems: all but 4A from Onouye, Chapter 4.

4.1.13 Solve for member forces *DE*, *DH*, and *GH*.

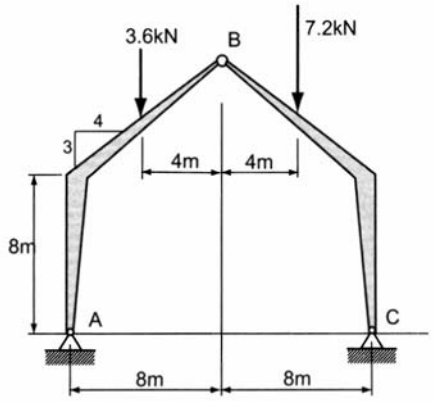
Partial answers to check with: DH = -13.4 k, DE = -6 k, GH = 6 k.



Problem 4.1.13

4.2.7 A three-hinged gabled frame supports two unequal roof loads as shown. Determine the support reactions and the internal pin forces at *B*.

Partial answers to check with: A_x = +1.54 kN, A_y = +4.5 kN, C_x = -1.54 kN, C_y = +6.3 kN, B_x = -1.54 kN (wrt AB) , B_y = -0.9 kN (wrt AB).



Problem 4.2.7

4A) The floor framing plan is subject to uniform distributed loads of: dead load = 35 psf, live load = 110 psf. Determine the resulting reactions by the beams & on the columns.

Partial answer to check with: R_{B1} = 6797 lb, R_{B2} = 18,125 lb, R_{B3} =11,328 lb, C_1 = 18,125 lb.