ENDS 231. Assignment #4

Date: 6/7/06, due 6/14/06

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

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

Partial answers to check with: \( DH = -13.4 \text{ k} \),
\( DE = -6 \text{ k} \), \( GH = 6 \text{ k} \).

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

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

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: \( R_{B1} = 6797 \text{ lb} \), \( R_{B2} = 18,125 \text{ lb} \), \( R_{B3} = 11,328 \text{ lb} \), \( C_1 = 18,125 \text{ lb} \).