**Structural Analysis Review**

Problem 1) For the beam shown below,

B

3 kip/ft

8 ft

20ft

8 ft

40 kip

A

C

1. Calculate reactions at A, B, and C
2. Plot the shear and moment diagrams
3. Identify the maximum positive and negative shears on the shear diagram
4. Identify the maximum positive and negative moments on the moment diagram

Problem 2)

B

9 ft

27 ft

36 ft

0.2 kip/ft

A

C

D

hinge

1. Calculate reactions at A, B, C and D.

[Hint: sum moments about point C and solve for the reaction at point D]

1. Plot the shear and moment diagrams. On the shear and moment diagrams, identify the maximum shear and maximum positive and negative moments.