

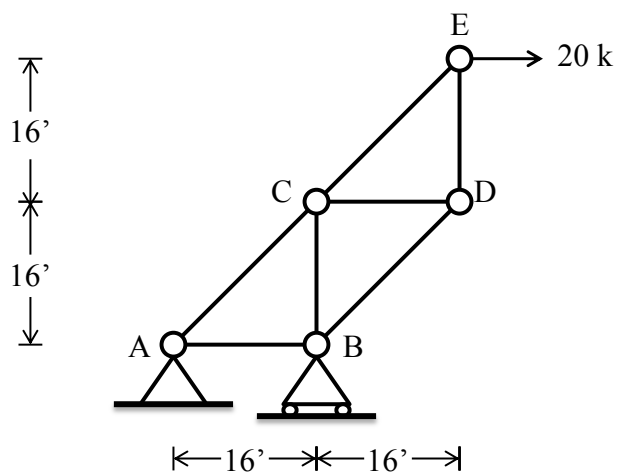
Homework #5

Note: Show all work, provide all answers in inches and radians

Problem 1

- Use virtual work to determine the vertical displacement of C
- Use virtual work to determine the horizontal displacement of E

Area of members: $A_{AB} = A_{AC} = A_{BC} = 3 \text{ in.}^2$ $A_{BD} = A_{CD} = A_{CE} = A_{DE} = 5 \text{ in.}^2$
 $E = 29,000 \text{ ksi}$ for all members



Problem 2

- Use virtual work to determine the rotation at A
- Use virtual work to determine the vertical displacement of C

$E = 29,000 \text{ ksi}$, $I = 100 \text{ in.}^4$
 $(EI)_{AB} = EI$
 $(EI)_{BC} = 2EI$

