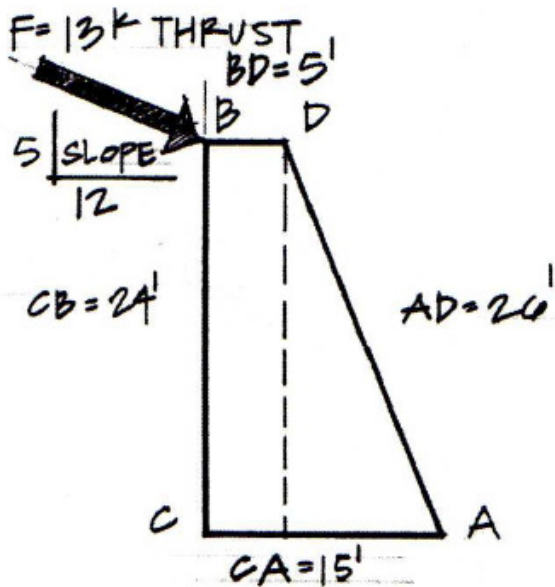
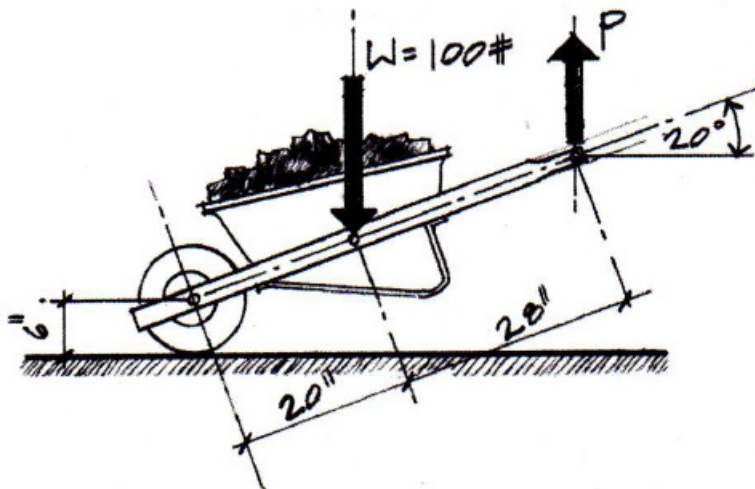


**CMCE 1104 Statics and Strength of Materials I**  
**Assignment 4: Moments**

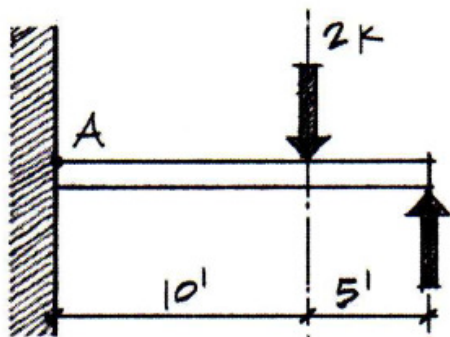
**2.15** Determine the moment  $M_A$  at the base of the buttress due to the applied thrust force  $F$ . Use Varignon's theorem. Force  $F$  has a 5:12 slope.



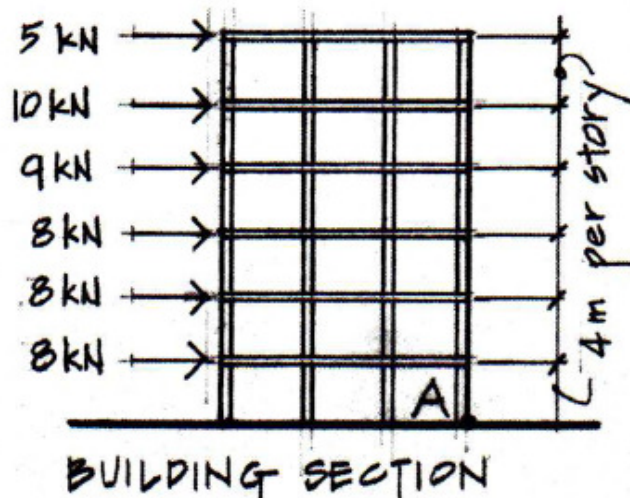
**2.17** For the wheelbarrow shown, find the moment of the 100# weight about the center of the wheel. Also, determine the force  $P$  required to resist this moment.



2.18 A cantilevered beam is subjected to two equal and opposite forces. Determine the resultant moment  $M_A$  at the beam support.



2.19 The figure shows the forces exerted by wind on each floor level of a six-story steel frame building. Determine the resultant overturning moment at the base of the building at A.



2.20 Determine the moment of the 1,300# force applied at truss joint D about points B and C. Use Varignon's theorem.

