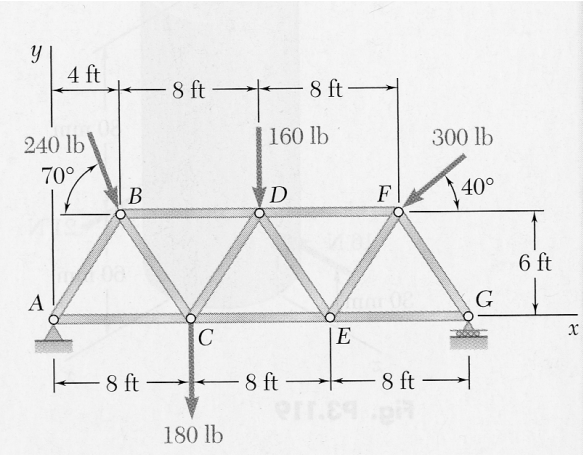
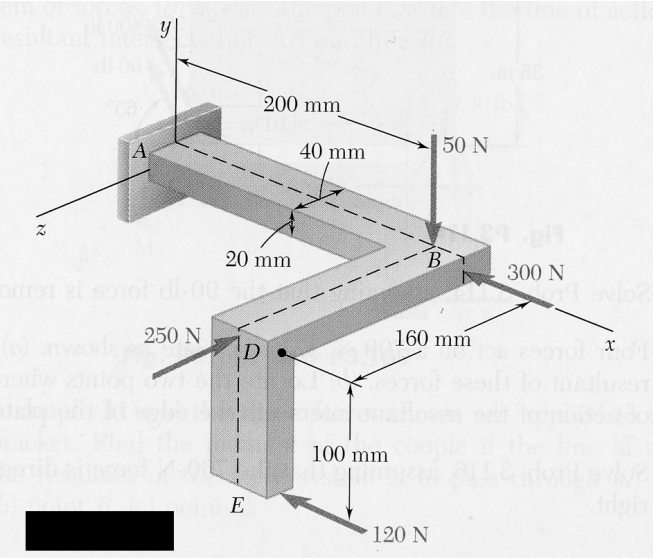
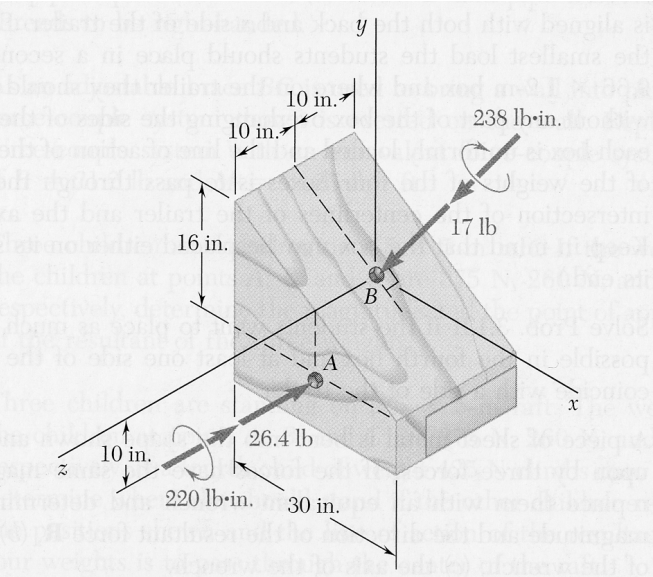
PHY 211 Statics HW 4



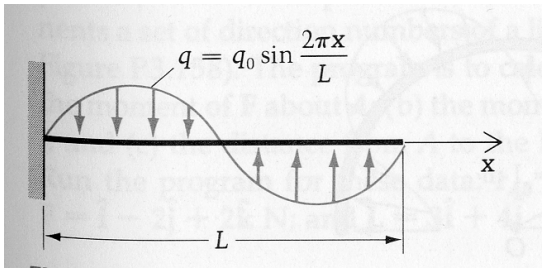
1. Reduce the system of forces shown to a single force resultant and determine where the line of the resultant force intersects the line ACEG. All the forces are in the plane of the truss.



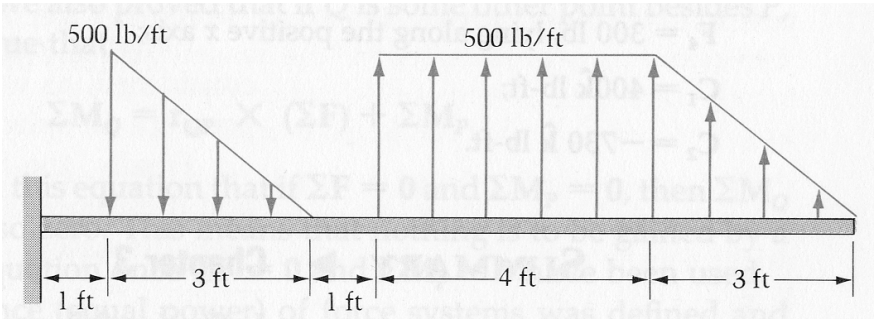
2. Replace the forces shown with an equivalent force and couple system acting at A.



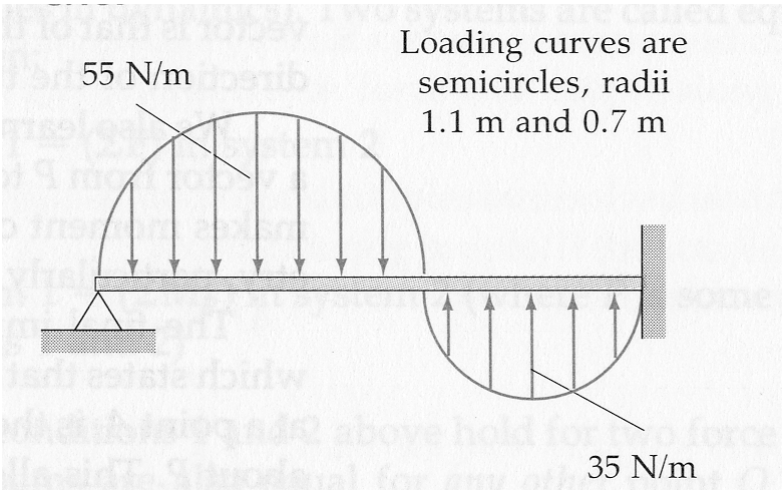
3. The two screwdrivers shown act on the block of wood. Replace then with a single equivalent screwdriver and determine the point where the line of the screwdriver intersects the *x*-*z* plane.



4. The distributed load *q(x)* is applied to the beam as shown. Determine the simplest resultant of this loading. (Hint: it won't be a single force resultant even though the forces are all parallel.)



5. Reduce the distributed loads shown to a single force resultant and determine the placement of that force along the beam.



6. Determine the magnitude and placement of the single force resultant of the semi-circular loading shown.