

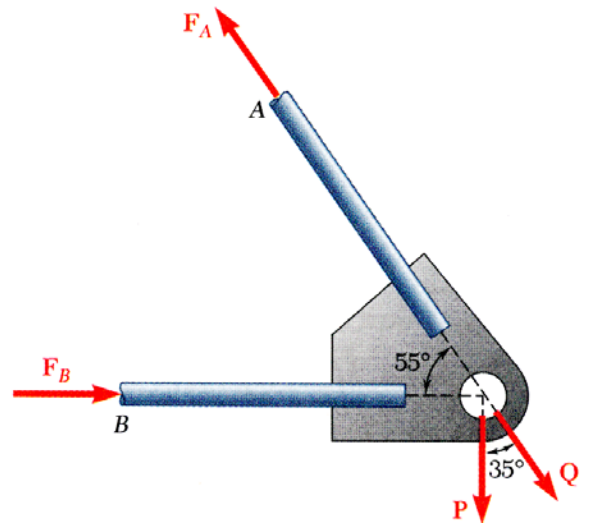
IDE 50 - Statics - Fall 2005

Exam 1 – Vectors, Particles and Moments

Name:

Section: J

- Two forces P and Q are applied as shown to an aircraft connection. Knowing that the connection is in equilibrium and that $P = 400$ lb and $Q = 520$ lb, determine the magnitudes of the forces exerted on the rods A and B .



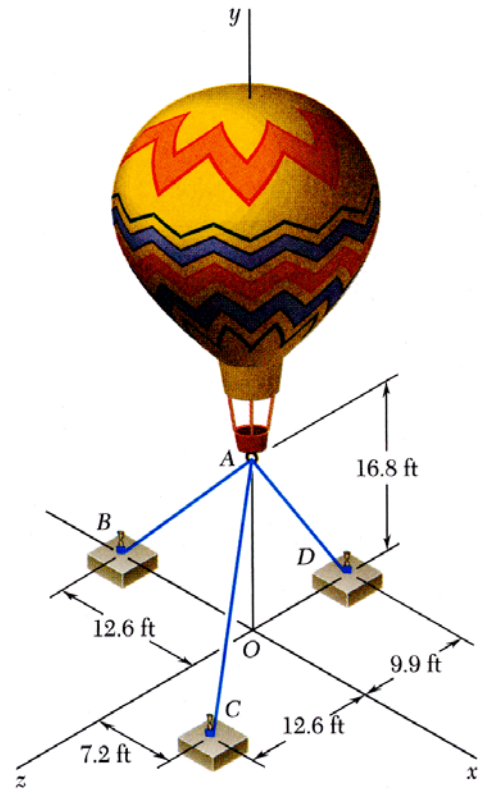
IDE 50 - Statics - Fall 2005

Exam 1 – Vectors, Particles and Moments

Name:

Section: J

2. Three cables are used to tether a balloon as shown. Determine the vertical force P exerted by the balloon at A knowing that the tension in cable AB is 60 lb.

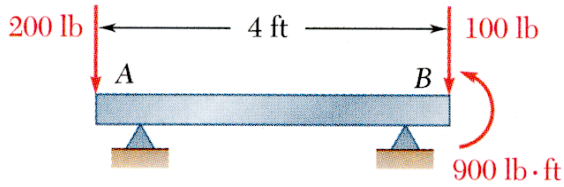
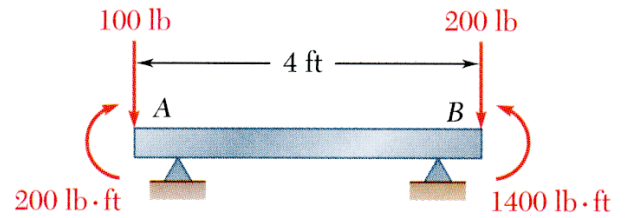


IDE 50 - Statics - Fall 2005

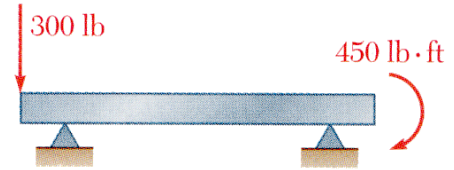
Exam 1 – Vectors, Particles and Moments

Name:
Section: J

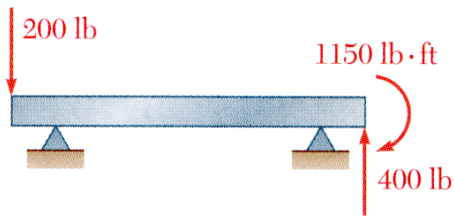
3. A 4-ft-long beam is loaded as shown to the right. Circle whether the loadings below are equivalent (E) or not equivalent (NE). Be sure to show your work.



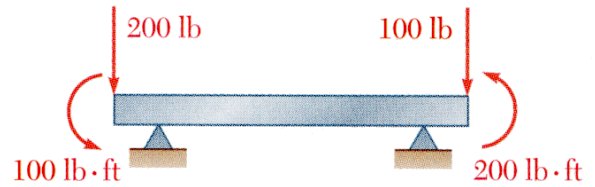
E or NE



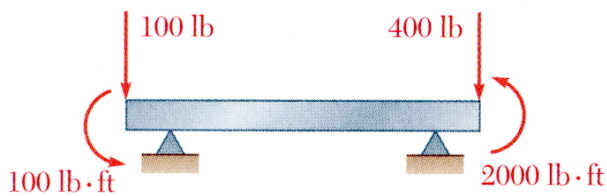
E or NE



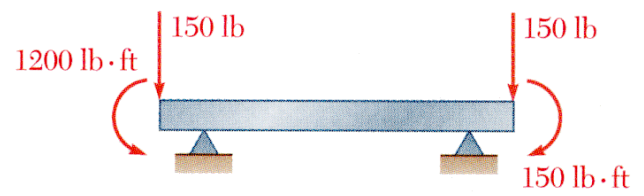
E or NE



E or NE



E or NE



E or NE

IDE 50 - Statics - Fall 2005

Exam 1 – Vectors, Particles and Moments

Name:

Section: J

4. Replace the loading by an equivalent resultant force and specify where its line of action intersects the beam, measured from point B .

