FE Review - Solid Mechanics - Statics

Review of vector mechanics and loads analysis

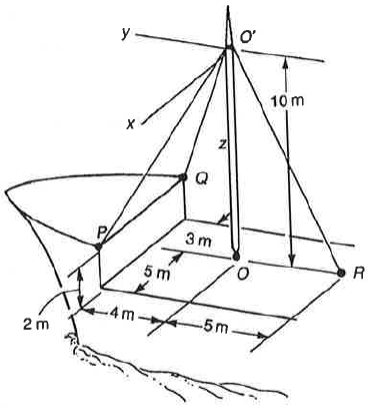

Exhibit 2

Outline:

- Introductory Concepts in Mechanics
- Vector Geometry and Algebra
- Force Systems
- Equilibrium
- Trusses
- Couple-Supporting Members
- Systems with Friction
- Distributed Forces

• **Example 1**:

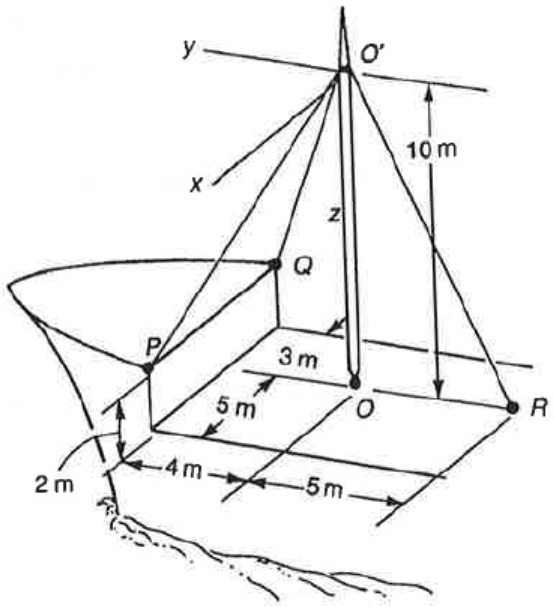

Exhibit 2

1. Determine the lengths of the guylines O'P and O'Q and the angle between them.

2. Suppose the guy line O'P has a tension of 800N. What is the moment from this force about O?

- **Example 2**:

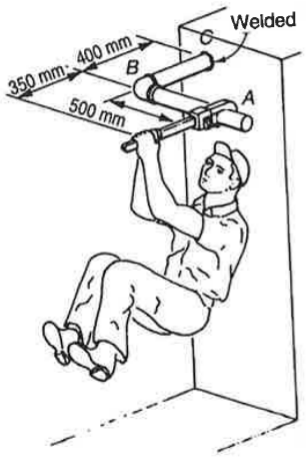

Exhibit 7.13

7.13 The plumber in Exhibit 7.13 exerts a vertical downward force of 1 kN on the wrench handle. The moment about C of this force has a magnitude of

a. 500 N•m
b. 750 N•m
c. 900 N•m
d. 1250 N•m

- **Example 3**:

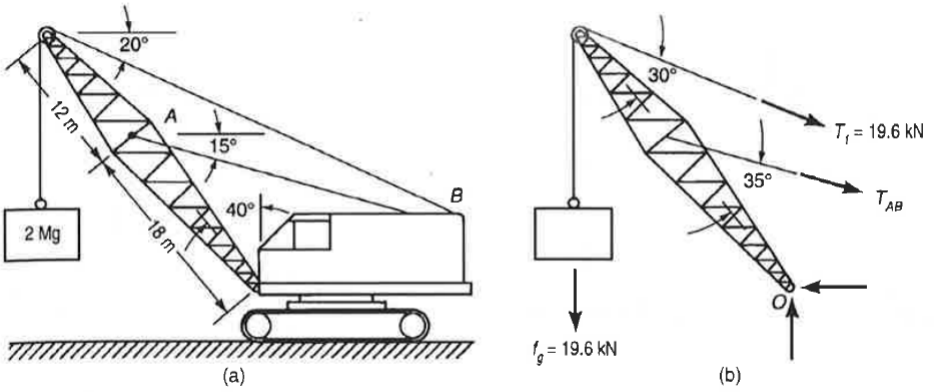

Exhibit 6

1. Neglecting all loads except the 2Mg load, find the tension in cable AB.