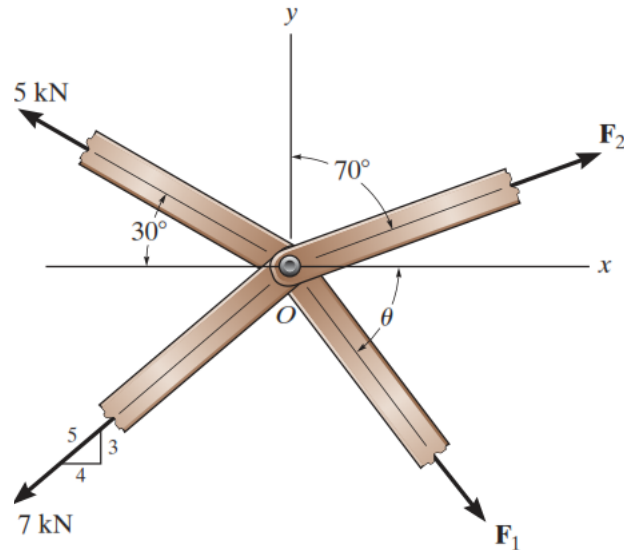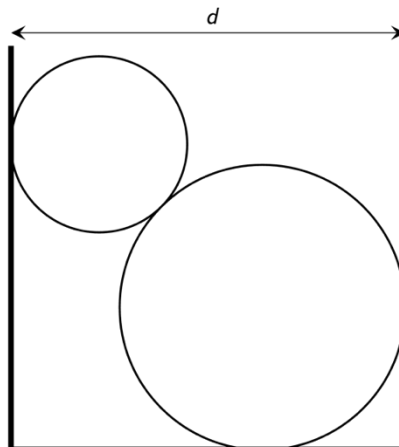# Quiz 1

*for the* ENS161 B5-1 and B6 classes *offered in* A.Y. 2025-2026 S1

Problem 1. The truss members pin-connected at O are in static equilibrium. F_1 has a magnitude of 4 kN.


Problem 2. Two cylinders are packed in a trough of width $d = 17$ ft. The larger cylinder has a diameter of 12 ft and weighs 1250 lb, while the corresponding values for the smaller cylinder are 10 ft and 870 lb.

Problem 3. Two chandeliers — A and B weighing 75 and 50 kg, respectively — are supported by steel wires.
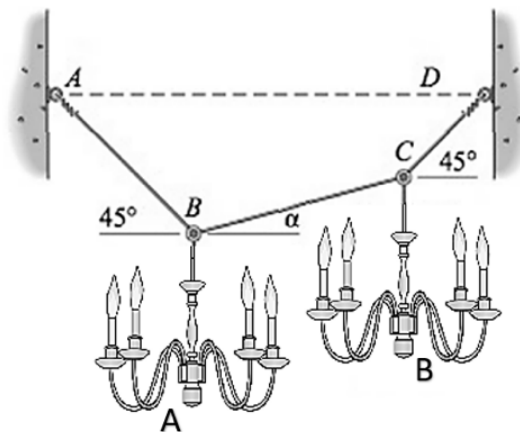
Problem 4. Rod *AB* is straight and has a bead at *C*. An elastic cord having 3-lb tensile force is attached between the bead and a support at *D*.
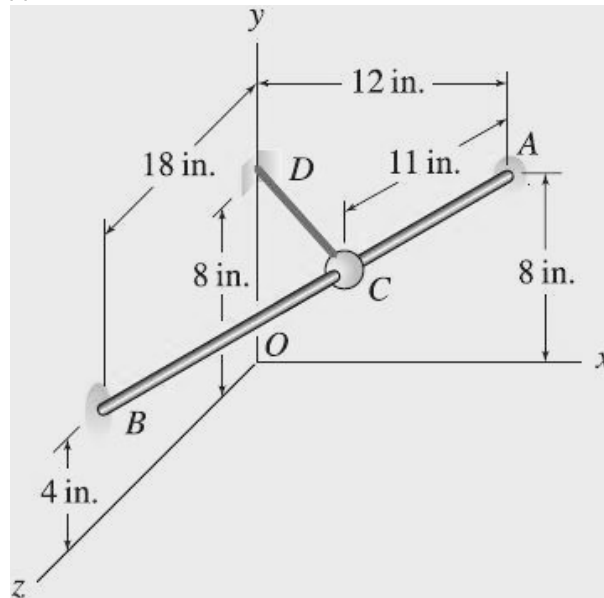
Problem 5. Fish catch is hoisted through an assembly of winch cable *BD* and members *AB* and *CB*. The cable can sustain tensions of up to 3 kN, and each member up to 2.5 kN.