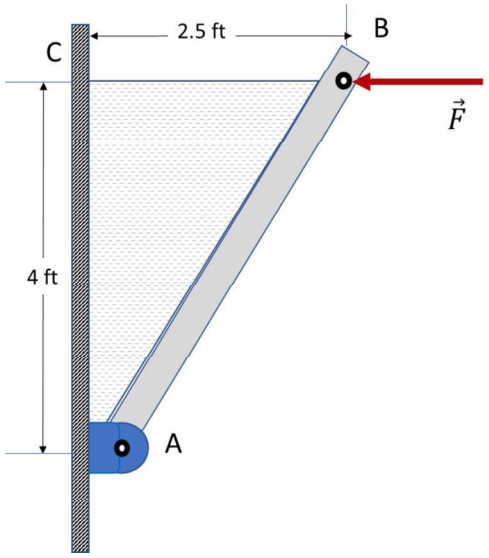
Homework H16.A

Given: The gate is structured as shown and has a width of b (out of the paper). The specific weight of the water is ρg.



Find:

a) Calculate the magnitude and location of the equivalent loading on the face of the gate.
b) Determine the reaction F to maintain the gate in equilibrium.
c) Determine the reactions at pin joint A.

Use the following parameter values in your work: b = 3 ft and ρg = 62.4 lb/ft^3.

Homework H16.B

Given: A water gate, shaped as a quarter-circle arc, has a width of b (out of the paper). The gate is pinned to a fixed support at A and is supported by a seal at B. The specific weight of the water is ρg.

Find: Determine the reaction on the gate at pin joint A and seal B.

Use the following parameter values in your work: b = 10 ft, d = 8 ft, R = 16 ft and ρg = 62.4 lb/ft^3.