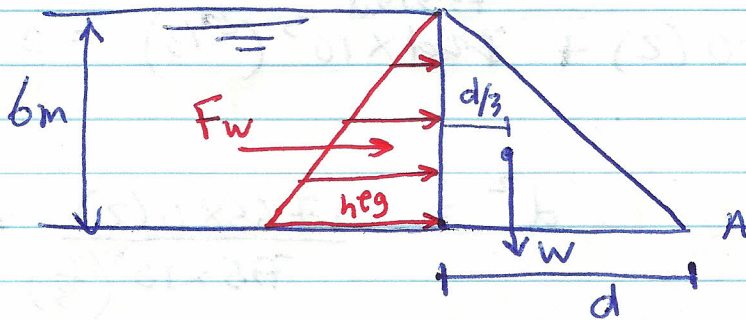


9-105



Pressure at base of dam is

$$h\epsilon g = 6(1000 \times 10^3)(9.81) = 58860 \times 10^3 \text{ KN/m}^2$$

So resultant force on dam from water

$$F_w = \frac{1}{2}(58860)(6) = 176580 \text{ KN/m}$$

acting at $\frac{2}{3}(6) = 4 \text{ m}$ from surface.

Weight of dam

$$W = \frac{1}{2}d(6)(2.5 \times 10^3 \text{ Kg}) \times 9.81$$

$$= 73.575d \times 10^3 \text{ KN/m}$$

$$= 73.575d \times 10^3 \text{ KN/m}$$

if water pressure causes dam to topple, at instant before toppling

