4.448 Homework 1

15 degree segment

t = 1m

R = 5m
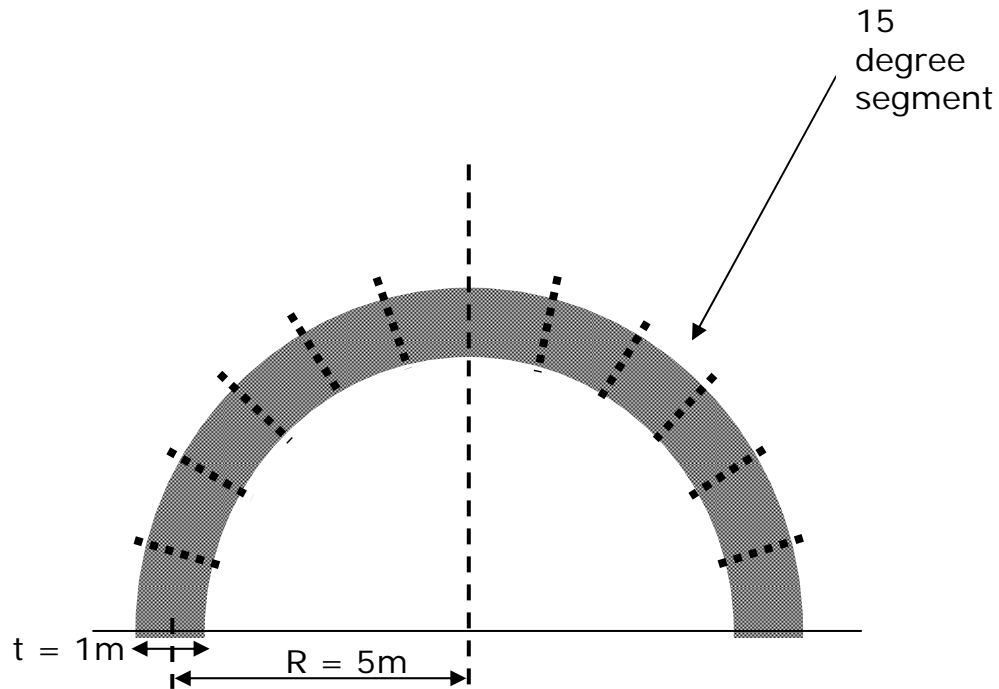
If this arch is 1m deep (into the page) and 1m thick, calculate the weight of each 15 degree segment of the arch assuming the density of stone is 2000 kg/m^3. What is the total weight of this arch? Using graphical analysis, compute the minimum and maximum values of horizontal thrust for this arch. The radius of the span is 5m.