

$$V = 1.5 \text{ m/s}$$

$$\rho_{(AIR)} = 1.25 \text{ Kg/m}^3$$

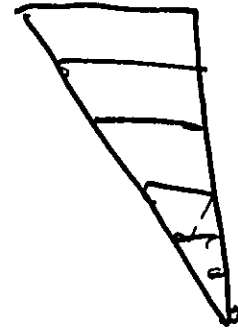
@ .1 $r_1 = .05$ $r_2 = .2$

@ .3 $r_1 = .1$ $r_2 = .3$

@ .5 $r_1 = .14$ $r_2 = .35$

@ .7 $r_1 = .16$ $r_2 = .4$

@ .9 $r_1 = .17$ $r_2 = .5$



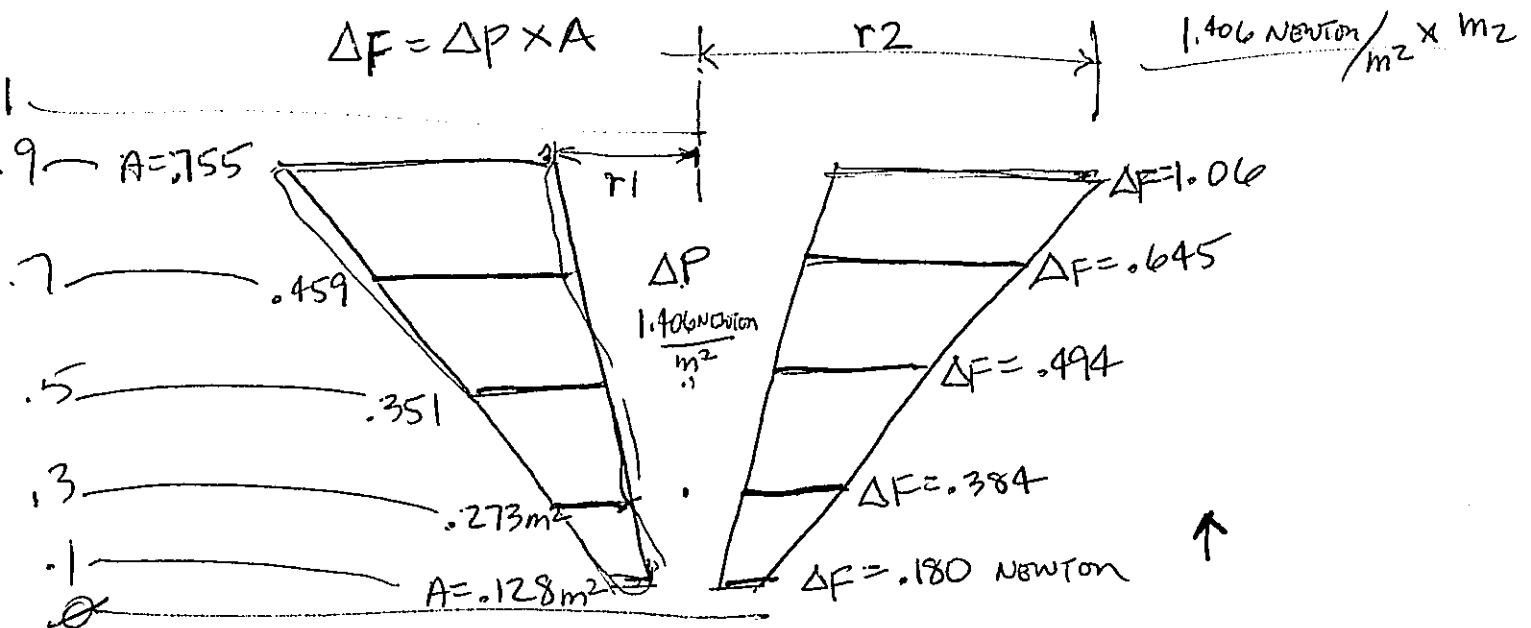
$$\frac{1.5}{1.5} = 225$$

$$\Delta P = \frac{1}{2} \rho v^2$$

$$\Delta P = \frac{1}{2} \times 1.25 \times (1.5)^2$$

$$\Delta P = .625 \times 2.5 = 1.406 \text{ NEWTON/m}^2$$

$$\Delta F = \Delta P \times A$$



VELOCITY \dot{v} (THEREFORE) ΔP IS CONSTANT FROM BOTTOM TO TOP. INCREASE IN AREA FROM BOTTOM TO TOP DETERMINES DIRECTION \dot{v} & MAGNITUDE OF FORCE. TO BE A FUNNEL, THE "WALLS" HAVE TO GET THICKER FROM BOTTOM TO TOP