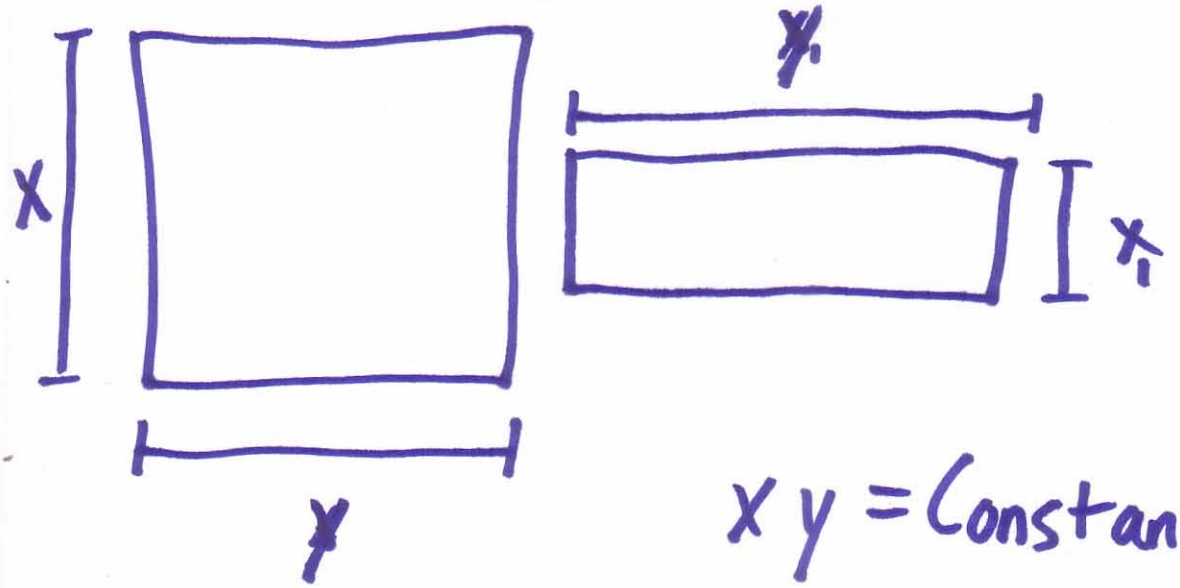
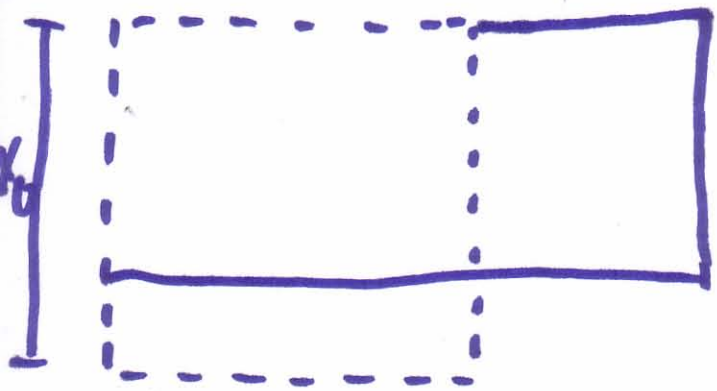
Given that each cross sectional area must be equal



$$xy = \text{Constant}$$

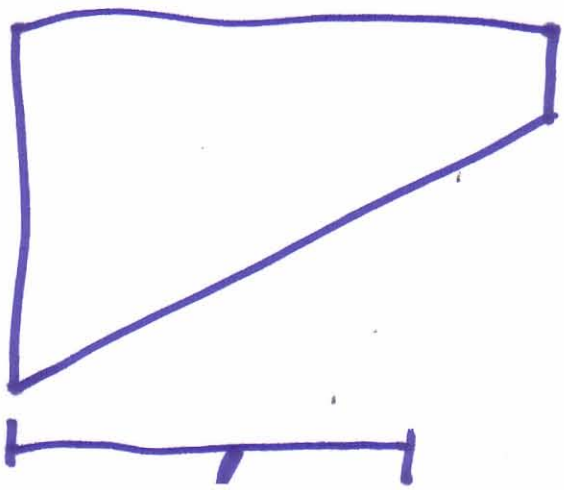
Given that $\frac{dx}{dl}$ is linear, or that the bottom rises linearly with an upward slope

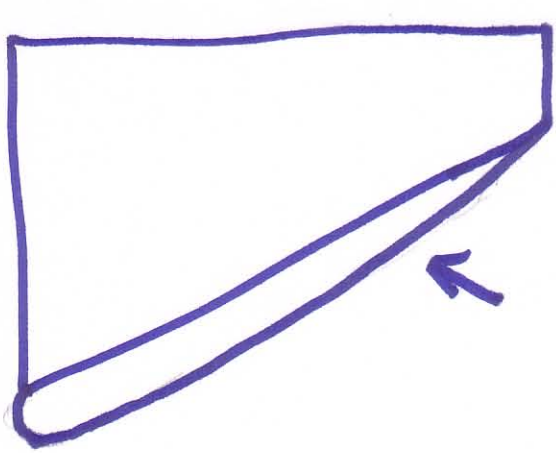


$$xy = C$$

$$\left(x_0 - l\frac{dx}{dl}\right)y = C$$

$$y = \frac{C}{\left(x_0 - l\frac{dx}{dy}\right)}$$





A foil will be used to create an upward pressure to bring the plastic up.

$$\frac{\rho \cdot v_1^2}{2} + P_1 = \frac{\rho \cdot v_2^2}{2} + P_2$$

This equation proves that a faster velocity creates a lower pressure. The foil causes the water underneath to move faster and with a lower pressure while the water above moves slower and with a higher pressure. This will bring the plastic up along the high pressure path.

Given the initial parameters of 5m x 10m square

$x_0 = 5m$

$y_0 = 10m$

total length = 40m

$\frac{dx}{dl} = .1$

$C = 50m^2$

$$y = \frac{C}{\left(x_0 - l\frac{dx}{dl}\right)}$$

$$y = \frac{50}{(5 - 40(.1))}$$

$y = 50m$ at the end

So a 5m x 10m initial opening will result in a 1m x 50m opening at the end. The parameters at any point can be found by changing the value of l