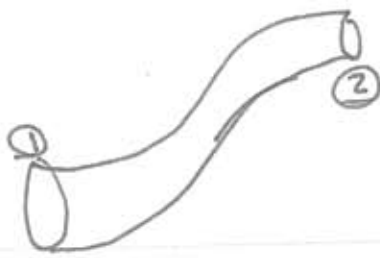


$$r = .07$$



$$r = .05 \quad h_2 = 5.2$$

$$\rho = 880$$

$$A_1 V_1 = A_2 V_2 = .053$$

$$P_2 = 101325$$

$$\pi (.07)^2 V_1 = .053$$

$$V_1 = 3.44$$

$$\pi (.05)^2 V_2 = .053$$

$$V_2 = 6.75$$

$$P_1 + \frac{1}{2} \rho V_1^2 + \rho g h_1 = P_2 + \frac{1}{2} \rho V_2^2 + \rho g h_2$$

$$P_1 + \frac{1}{2} (880) (3.44)^2 + 0 = 101325 + \frac{1}{2} (880) (6.75)^2 + 880 (9.8) (5.2)$$

$$P_1 + 5207 + 0 = 101325 + 20048 + 44845$$

$$\underline{\underline{P_1 = 161011 \text{ Pascal}}}$$

$$\text{Amount} = \text{rate} \times \text{time}$$

$$3.2 \text{ m}^3 = \left( .053 \frac{\text{m}^3}{\text{s}} \right) \text{time}$$

$$\underline{\underline{\text{time} = 60.4 \text{ second}}}$$