Water flows smoothly with speed $v_1$ from a tube with diameter $d$ to a larger one with diameter $D$ where its speed is $v_2$. Pressure in the tubes is measured by gauges $P_1$ and $P_2$. Which of the following statements is most nearly correct? ($\rho$ is density of water)

A. $P_1 < P_2$
B. $v_1 > v_2$
C. $P_1 v_1 = P_2 v_2$
D. $\frac{1}{2} \rho v_1^2 = \frac{1}{2} \rho v_2^2$
E. none of the above is true
Q1 - Answer = c
Q2 - Problem B - Last Name L-Z

- Water flows smoothly with speed $v_1$ from a tube with diameter $D$ to a smaller one with diameter $d$ where its speed is $v_2$. Pressure in the tubes is measured by gauges $P_1$ and $P_2$. Which of the following statements is most nearly correct? ($\rho$ is density of water)

A. $v_2 < v_1$

B. $P_2 < P_1$

C. $\frac{1}{2} \rho v_1^2 = \frac{1}{2} \rho v_2^2$

D. $\frac{P_1}{v_1} = \frac{P_2}{v_2}$

E. none of above is true