

Name: _____ Date: _____ Course: _____ Professor: _____

F9a Prelab: Fluid Mechanics & Bernoulli's Principle



Read the lab instructions before answering the questions

1. Lane has two pipes connected to each other that transport water because he is very thirsty. The given density of water is $\rho = 997 \text{ kg/m}^3$. The flow rate of water through the pipes is $R = .009463522 \text{ m}^3/\text{s}$, but they have different diameters. The first pipe has a measured pressure $P_1 = 12.927 \text{ MPa}$ and a velocity of $v = 28.894 \text{ m/s}$. The second pipe has a measured velocity of $v = 63.525 \text{ m/s}$.

A) What is the pressure in the second pipe?

B) What is the diameter of the second pipe?