

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Course: \_\_\_\_\_ Professor: \_\_\_\_\_

## F9a Prelab: Fluid Mechanics & Bernoulli's Principle



Read the lab instructions before answering the questions

1. You have two pipes connected to each other that transport water. 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  $P_1 = 12.832 \text{ MPa}$  and a velocity of  $v = 32.051 \text{ m/s}$ . The second pipe has a measured velocity of  $v = 57.000 \text{ m/s}$ .

A) What is the pressure in the second pipe?

B) What is the diameter of the second pipe?