

Signature: Name: Marks:

Boyle's Law Worksheet

Q1.

The figure shows two identical glass tubes with gas trapped by mercury columns in two different positions. If the atmospheric pressure is 76 cm Hg, determine the values of pressure P_1 , P_2 and the length of the gas column s .

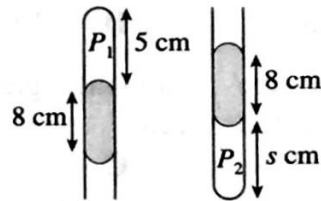


Figure 1

Q2.

The figure shows a beaker inverted and placed on the water surface to trap some air in it. The beaker is then pushed vertically into the water until the length of air trapped in the beaker is $l/2$ cm. Calculate the depth of the beaker in the water. [Atm pressure = 10m of water]

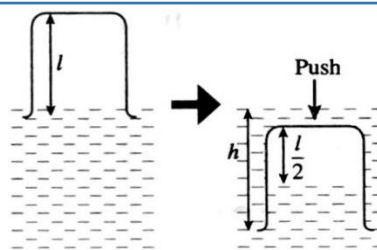


Figure 2

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Q3.

The volume of an air bubble at the depth of h m of a lake is 1.2 cm^3 . What is the depth of the air bubble if its volume is 1.5 cm^3 at the surface of the sea and the atm pressure is 10m of water?