

# Barometer And Manometer Notes

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## Barometer and Manometer Notes

Compressibility:

Incompressibility:

Liquids & Solids: \_\_\_\_\_

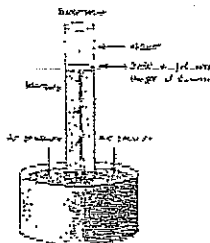
Gases: \_\_\_\_\_

### Different Ways of Measuring Pressure

Principle of Barometer and Manometer:

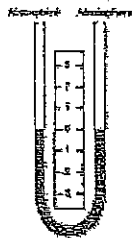
Barometric Pressure:

Barometer (see figure below):

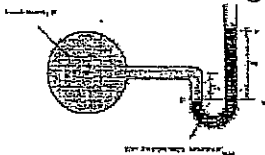


Manometer:

Manometer with equal pressure on both sides.

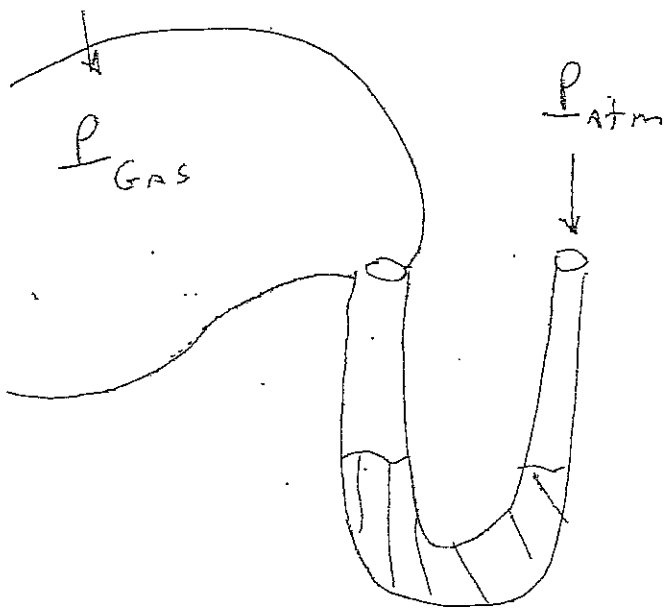


Manometer with gas pressure on one side and atmosphere on other.

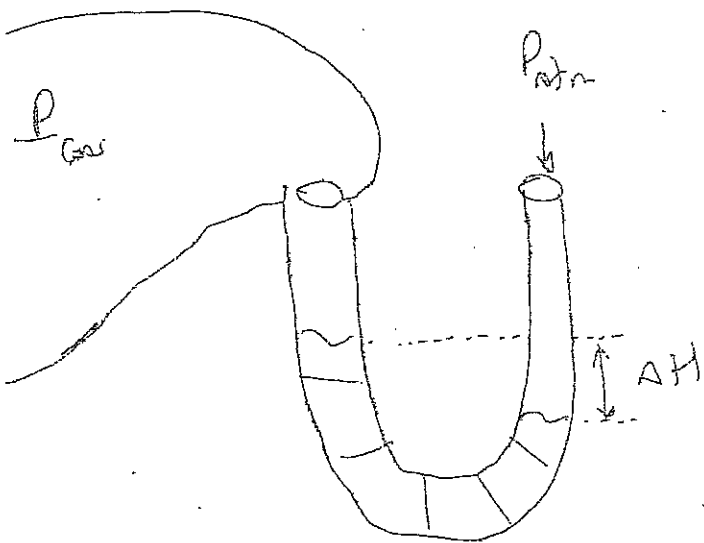


# Manometer (U-tube)

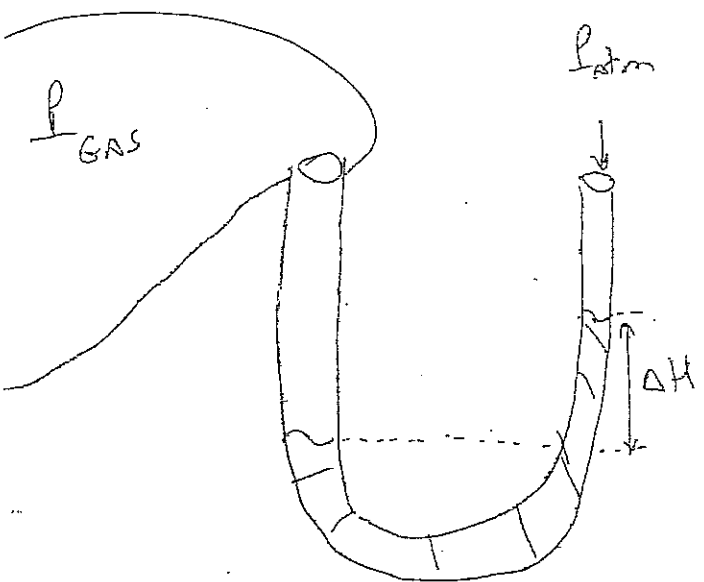
Balloon



$$\underline{P}_{GAS} < \underline{P}_{atm}$$

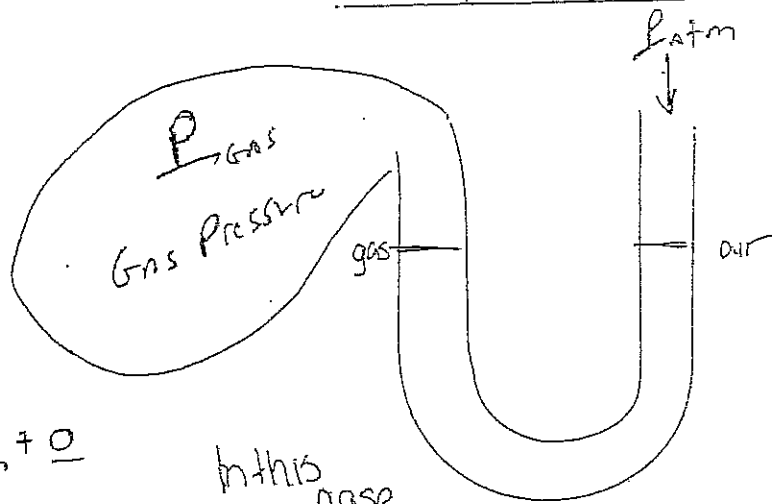


$$\underline{P}_{GAS} > \underline{P}_{atm}$$



$$\underline{P}_{GAS} > \underline{P}_{atm}$$

# U-tube Manometer



\* With pencil/pen, show where liquid level is for each.

$$P_{\text{gas}} = P_{\text{atm}} + 0$$

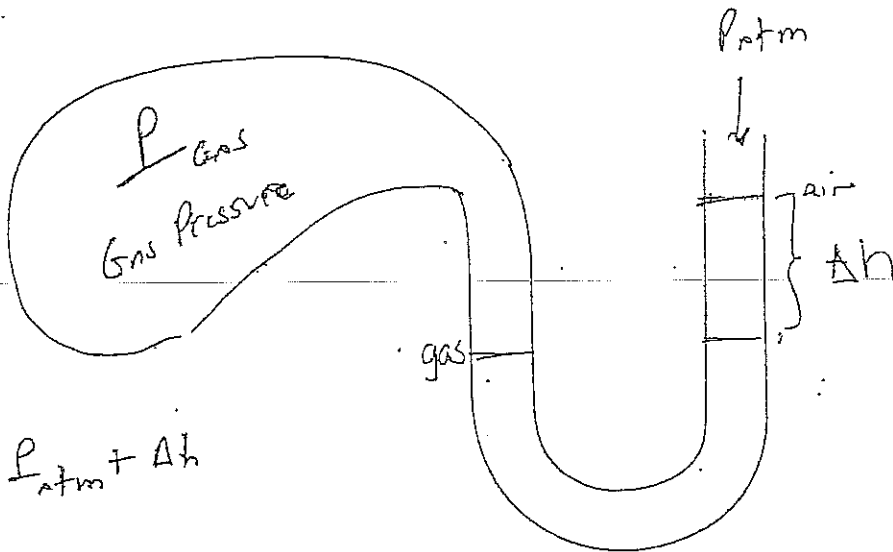
In this case

$$P_{\text{gas}} = P_{\text{atm}}$$

Calculate U-tube problem, use:

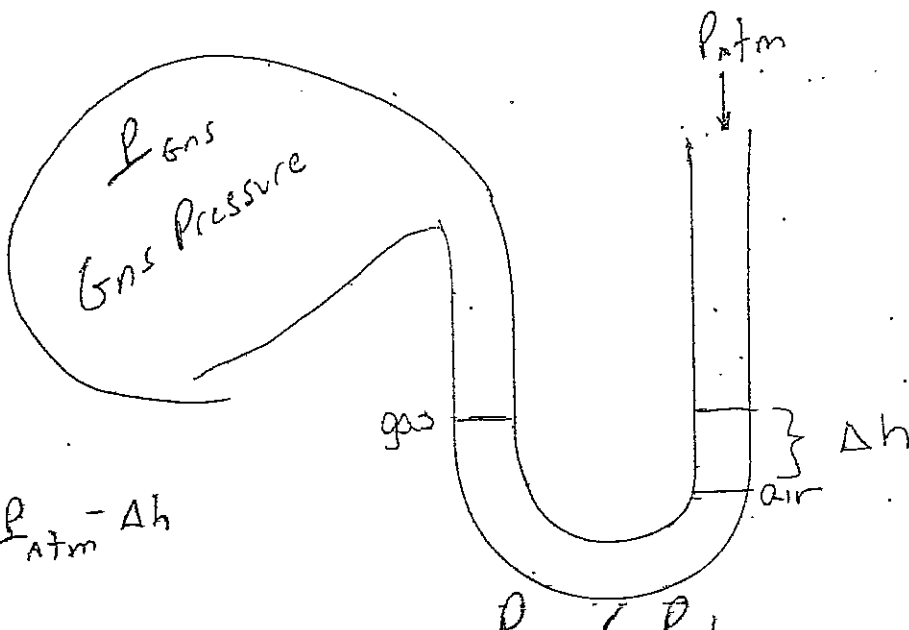
$$P_{\text{gas}} = P_{\text{atm}} \pm \Delta h$$

$\Delta h$  - difference in heights of each side of liquid level.



$$P_{\text{gas}} = P_{\text{atm}} + \Delta h$$

$$P_{\text{gas}} > P_{\text{atm}}$$



$$P_{\text{gas}} = P_{\text{atm}} - \Delta h$$

D / D<sub>1</sub>

Do the math, calculate pressure

