

Manometers Worksheet:

Solve for x in the appropriate units

name: SOLUTIONS

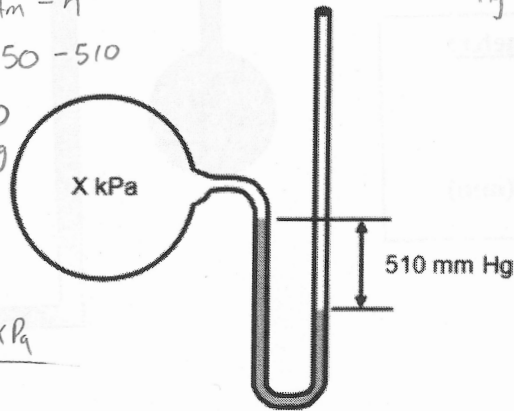
a)

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

$$P_{\text{gas}} = 950 - 510$$

$$P_{\text{gas}} = 440 \text{ mmHg}$$

58.6 kPa

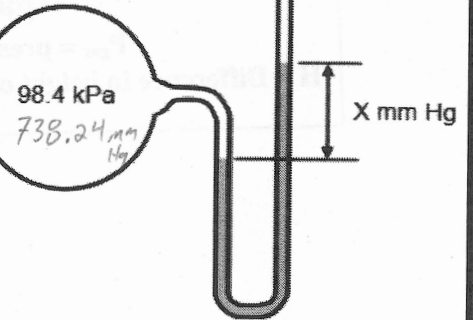


b)

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

$$738.24 = 440.8 + h$$

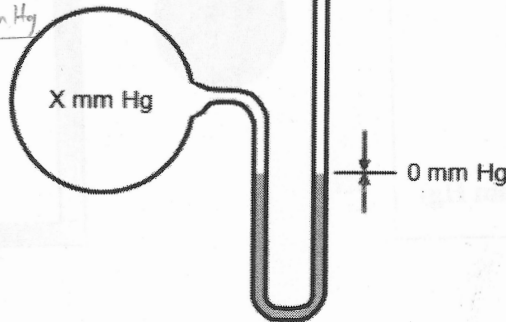
$$h = 297.4 \text{ mmHg}$$



c)

$$P_{\text{gas}} = P_{\text{atm}} \quad (h=0)$$

$$= 564.2 \text{ mmHg}$$

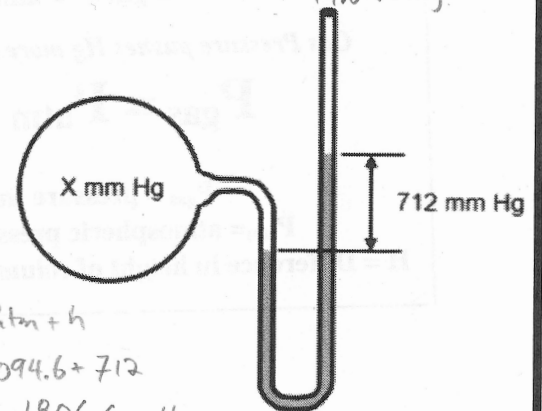


d)

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

$$P_{\text{gas}} = 1094.6 + 712$$

$$P_{\text{gas}} = 1806.6 \text{ mmHg}$$



e)

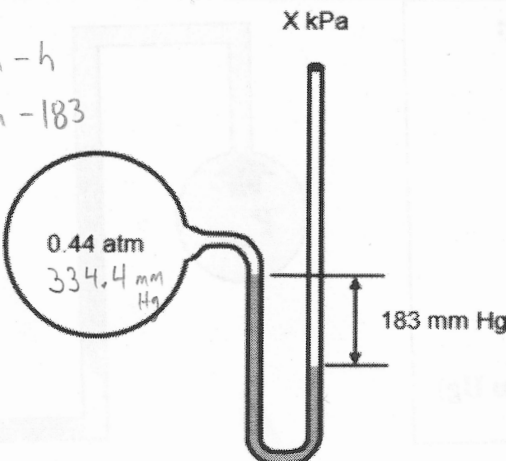
$$P_{\text{gas}} = P_{\text{atm}} - h$$

$$334.4 = P_{\text{atm}} - 183$$

$$P_{\text{atm}} = 517.4 \text{ mmHg}$$

$$\downarrow$$

$$69 \text{ kPa}$$



f)

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

$$783 = 528 + h$$

$$h = 255 \text{ mmHg}$$

