

Revised August 2011

HONORS WORKSHEET 6s: ANSWERS

1. In this question P = pressure, V = volume, n = moles of gas, T = Temperature, R = gas constant.

(a) $PV = a$ constant at constant T and n

(b) $\frac{V}{T} = a$ constant at constant P and n

(c) $\frac{V}{n} = a$ constant at constant T and P

(d) $\frac{P}{T} = a$ constant at constant V and n

(e) $\frac{PV}{T} = a$ constant at constant n

(f) $PV = nRT$

2 Kelvin

3. $0.0821 \text{ atm L K}^{-1} \text{ mol}^{-1}$

4. $7.60 \times 10^5 \text{ torr}$

5. 6.13 atm, the can could explode

6. 2822 KPa

7. $2.43 \times 10^{-5} \text{ atm}$

8. 24.45 L

9. Molar Mass = $\frac{(\text{mass}) (R) (T)}{(P) (V)}$

10.

(a) $P_{\text{total}} = P_A + P_B + P_C$

(b) $P_{\text{total}} = n_{\text{total}} \left(\frac{(R)(T)}{V} \right)$

11. 0.017 moles