**COMBINED AND IDEAL GAS LAW WORKSHEET**

1. P = pressure (kPa) V = volume (L or dm3) n = # of moles R = constant (8.31) T = temp (K)
2. 87.5 kPa
3. 37.1 kPa
4. .372 mol
5. 133 dm3
6. 1.87 dm3 (can use ideal OR stoichiometry to solve since at STP – use 22.4L/mol)
7. 216g
8. .0233 mol
9. 17.3 dm3
10. 95.3 K
11. 55.5 K
12. 242 mL
13. 64.1 kPa
14. 297 mL
15. CO2 mass = 44 g/mol, NH3 mass = 17 g/mol NH3 is lighter, so it effuses faster

**CHAPTER 12 PRACTICE PROBLEM WORKSHEET**

**SECTION 12.1**

1. Increased heat = increased pressure
2. Decreased heat = decreased pressure

**SECTION 12.2**

1. Increased heat = increased volume
2. 4 atmospheres, since 3 tanks were added to the 1 tank
3. 3 times greater since the volume is now 1/3 of original

**SECTION 12.3**

1. 341 kPa
2. Try plugging in some numbers to work this out! You’ll find that the answer is no.
3. 15 L
4. 466 kPa
5. 71.9 kPa

**SECTION 12.4**

1. 1.3 X 102 mol
2. 3.01 X 102 K
3. 1.03 mol = 4.12 grams
4. 50.4L
5. 6.66 L

**SECTION 12.5**

1. 7.95 L
2. Calculate # of moles first to find n; 9.63 X 10-4. Gives 2.16 X 10-2 L
3. 12.7 L
4. Partial pressure of the oxygen = 26.5 kPa; gives 3.75 X 10-2 mol
5. Oxygen mass = 36, nitrogen mass = 28. Nitrogen is lighter, so it effuses faster.