**Assignment 18**

**Charles Law (pages 1-2)**

1. 0.47 L
2. 0.71 L
3. 285.1 mL or 0.285 L
4. 1.81 L
5. 2.5 L
6. 51,286 K or 51553 Celsius
7. 279.75 K or 6.75 Celsius

**Assignment 19**

**Boyles Law (page 3)**

1. P1 V1 = P2 V2
2. Pressure
3. kPa, atm, mmHg, torr
4. Volume
5. L, mL
6. V2 = 8 L
7. P2 = 2.5 atm
8. V2 = 800 mL
9. P2 = 2800 torr

**Assignment 20**

**(Continued from above - page 4)**

1. V2 = 0.5 L
2. P2 = 352.4 mmHg
3.
4. P2 = 4
5. P2 = 1.8
6. P1 = 3.3
7. V2 = 1
8. V1 = 30

**Assignment 21**

**Gay-Lussac’s Law Worksheet with Answers (page 5)**

1. P2 = 1.03 atm
2. P2 = 0.67 atm
3. P2 = 181.9 mmHg
4. T2 = 379.8 K = 106.8 Celsius

**Assignment 22**

**(Continued from above - page 6)**

1. P2 = 689.4mmHg
2. T2 = 340.3 K = 67.3 Celsius
3. P2 = 634.2 mmHg
4. P2 = 51.7 kPa

**Assignment 23**

**Combined Gas Law Worksheet (page 7)**

1. V2 = 1.29 L
2. V2 = 7.11 L
3. V2 = 767 L
4. V2 = 3.53 L

**Assignment 24**

**(Continued from above - page 8)**

1. V2 = 406.5 mL
2. V2 = 873, 015.9 L
3. V2 = 2.42 L
4. P2 = 0.97 atm
5. V2 = 191.25 mL

**Assignment 25**

**Ideal Gas Law Packet (page 9)**

PV = nRT

P = atm; kPa, mmHg or torr

V = L

n = mol

T = K

R = (L x atm)/(mol x K) OR (L x kPa)/(mol x K) OR (L x mmHg OR torr)/(mol x K)

1. P = 0.13 atm OR 13.2 kPa OR 98.8 mmHg or torr
2. T = 23 Celsius
3. 1.15 mol; 81.7 g
4. V = 77 L
5. V = 22.4 L

\*\* answers were given for these, but I did them out anyways. Answers may vary due to rounding.

**Assignment 26**

**(Continued from above - page 10)**

1. V = 11,8 L
2. Molecular mass = 44.1 g/mol
3. n = 39.2 g
4. P = 0.61 atm OR 61.8 kPa OR 463.6 mmHg or torr
5. P = 0.41 atm OR 41.5 kPa OR 311.6 mmHg or torr

**Assignment 27**

**Ideal Gas Law Worksheet (page 11-12)**

1. T = 204.6 K OR -68.4 Celsius
2. n = 1.26 mol
3. P = 1.64 atm OR 166.1 kPa OR 1246.4 mmHg or torr
4. V = 2311 L
5. P = 5.3 atm OR 536.9 kPa OR 4028 mmHg or torr

True/False

1. Low
2. atm
3. More
4. TRUE
5. TRUE
6. TRUE
7. Kelvin
8. 22.4

Matching

1. C
2. F, J, K
3. D, G, H, L, M
4. A, E, I

 Circle letters: C, D, E, F, G, L, M

**Assignment 28**

**Worksheet - Dalton’s Law of Partial Pressure (page 13)**

1. 759 mmHg
2. 161 mmHg
3. 10.2 kPa
4. 0.0056 atm
5. a. 12.9 torr

b. 0.017 atm

c. 1.72 kPa

**Assignment 29**

**(page 14)**

1. 24.4 g HCl
2. 59.5 g Fe2O3
3. 2.68 g C
4. 60 g C2H6
5. 0.06 mol C2H6

**Assignment 30**

**Graham’s Law of Effusion (page 15)**

1. Hydrogen effuses 4.5x’s faster than carbon dioxide
2. He diffuses 2.06x’s faster than NH3
3. NO2 diffuses 1.16x’s faster
4. Ar diffuses 1.81x’s faster
5. Tropical fruit - lighter gasses travel faster than heavier gasses