Gas Law Worksheets Answer Key

Ws #1

1. 106 mL
2. 9.52 atm
3. 1.00 x 10^2 torr
4. 8.83 L
5. 34.5 mL
6. 9.90 x 10^2 torr
7. 333mL

Ws #2

1. V_2 = 3.47 L
2. P_2 = 1970 torr
3. P_2 = .910 atm
4. V_2 = 180 L
5. T_2 = 330 K or 57°C
6. V_2 = 8.36 L
7. P_2 = 4.36 atm
8. V_2 = 4.9L
9. V_2 6250 L
10. V_2 = 2.600 L

Ws #3

1. V_2= 104 mL
2. P_2 = 394 KPa
3. V_2 – 3.72 L
4. P_2 = 1.0 x 10^2 torr
5. V_2 = 8.83 L
6. V_2 = 34.5 mL
7. 700 mmHg (1 sf)
8. V_2 = .566 L
9. V_2 = 87.2 L
10. V_2 = 26.3 mL

Ws#4

1. 1.22 atm
2. 6.17 L
3. 101 g CL_2
4. 619 KPa
5. .0157 mol O_2
6. 81.5 g/mol
7. 99.3 g/mol
8. 13.9 g CO_2
9. 33.7 atm
10. 204 L

Ws#5

1. 21.2 L H_2
2. .272 g Mg
3. $4NH_3 + 5\ O_2 \rightarrow 4\ NO + 6\ H_2O$
   a) 18.8 L O_2 b) 5.3 mol H_2O c) 13.9 g H_2O
4. 7.98 g LiOH

Ws#6

1. $CH_4 + 2\ O_2 \rightarrow CO_2 + 2\ H_2O$ b) 2.00 mol H_2O c) .500 mol H_2O
2. a) 2-1-2-2 b) 2.5 L H_2
3. a) 1-2-1-1 b) 11 L C_2H_2
4. $2Na_2O_2 + 2\ H_2O \rightarrow 4\ NaOH + O_2$ b) 6.40 g Na_2O_2
5. a) 1-1-2-1 b)186 L H_2
6. $Zn + H_2SO_4 \rightarrow H_2 + ZNSO_4$ b) 1.37g Zn

Ws#7

1. NaN_3, KNO_3, SiO_2
2. N_2
3. 2-2-3, 10-2-1-5-1
4. The first reaction produces more N_2. You can tell by the coefficient.
5. Na metal is very reactive, explosive
6. 3.05 mol N_2, 2.03 mol Na
7. .203 mol N_2
8. 3.255 mol N_2
9. 72.87 L N_2
10. 79.03 L
11. 1.0 x 10^2 L
12. So excess gas can escape.
13. You would get way too much N_2 produce and it would hurt the driver.
14. Yes ! ☺

Ws#8

1. a) 2.00 x10^2 mL, b) 630 mL, c) 2.5x10^2 mL, d) 1.00x10^3
2. a) 1.17 atm, b) .916 atm, c) 1.1 atm d) 2.00 atm
3. a) 29.2 mL b) 22.9 mL, c) 27 mL, d) 50 mL
4. 2.12 atm
5. 3. 2.06 x 10^{23} molecules
6. 2.12 atm
7. .0264 mol O_2
8. 63.7C
9. 69.3 g/mol
10. 85.2 mL
11. 1.7 atm
12. 2.01 L