Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 7K – *Ideal Gas Law* 20 Points

*Complete the following problems based on the ideal gas law*

| *Ideal Gas Law Forms* | $P = \frac{nRT}{V}$ | $V = \frac{nRT}{P}$ | $n = \frac{PV}{RT}$ | $T = \frac{PV}{nR}$ |
|---|---|---|---|---|
| $PV = nRT$ | | | | |
| Ideal Gas Constant [*R*] | $R = 0.0821 \frac{L \cdot atm}{mol \cdot K}$ | | | |

P = 1.48atm, V = 32.48L,
n = 2.45mol, T = ____K

| | |
|---|---|
| T = | |
| T = | |

P = 6.39atm, V = 21.82L,
n = ____mol, T = 428.43K

| | |
|---|---|
| n = | |
| n = | |

P = ____atm, V = 26.74L,
n = 0.93mol, T = 327.38K

| | |
|---|---|
| P = | |
| P = | |

P = 0.82atm, V = ____L,
n = 0.52mol, T = 283.58K

| | |
|---|---|
| V = | |
| V = | |

P = 3.47atm, V = 51.93L,
n = ____mol, T = 475.25K

| | |
|---|---|
| n = | |
| n = | |

P = 5.27atm, V = ____L,
n = 4.38mol, T = 538.49K

| | |
|---|---|
| V = | |
| V = | |

| P = ____atm, V = 42.50L,<br>n = 3.74mol, T = 613.58K | |
|---|---|
| P = | |
| P = | |

| P = 5.29atm, V = 4.28L,<br>n = 0.94mol, T = ____K | |
|---|---|
| T = | |
| T = | |

| P = 3.28atm, V = ____L,<br>n = 0.93mol, T = 328.40K | |
|---|---|
| V = | |
| V = | |

| P = 3.95atm, V = 10.42L,<br>n = ____mol, T = 249.48K | |
|---|---|
| n = | |
| n = | |