

Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 7H – *Fundamental Gas Law Review*

20 Points

Complete the following problems based on the three fundamental gas laws

<i>Boyle's Law Forms</i>	$P_1 = \frac{P_2 V_2}{V_1}$	$V_1 = \frac{P_2 V_2}{P_1}$	$P_2 = \frac{P_1 V_1}{V_2}$	$V_2 = \frac{P_1 V_1}{P_2}$
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<i>Charles' Law Forms</i>	$V_1 = \frac{V_2 T_1}{T_2}$	$T_1 = \frac{V_1 T_2}{V_2}$	$V_2 = \frac{V_1 T_2}{T_1}$	$T_2 = \frac{V_2 T_1}{V_1}$
$V_1 T_2 = V_2 T_1$				

<i>Gay-Lussac's Law Forms</i>	$P_1 = \frac{P_2 T_1}{T_2}$	$T_1 = \frac{P_1 T_2}{P_2}$	$P_2 = \frac{P_1 T_2}{T_1}$	$T_2 = \frac{P_2 T_1}{P_1}$
$P_1 T_2 = P_2 T_1$				

$V_1 = 1.81\text{L}, P_1 = 6.63\text{atm}$
 $V_2 = 4.32\text{L}, P_2 = \underline{\hspace{1cm}}\text{atm}$

$P_2 =$ _____

$P_2 =$ _____

$V_1 = \underline{\hspace{1cm}}\text{L}, P_1 = 7.95\text{atm}$
 $V_2 = 3.17\text{L}, P_2 = 5.34\text{atm}$

$V_1 =$ _____

$V_1 =$ _____

$V_1 = 2.48\text{L}, T_1 = \underline{\hspace{1cm}}\text{K}$
 $V_2 = 1.75\text{L}, T_2 = 610.12\text{K}$

$T_1 =$ _____

$T_1 =$ _____

$V_1 = 2.06\text{L}, T_1 = 368.32\text{K}$
 $V_2 = \underline{\hspace{1cm}}\text{L}, T_2 = 472.4\text{K}$

$V_2 =$ _____

$V_2 =$ _____

$P_1 = 10.59\text{atm}, T_1 = 295.58\text{K}$
 $P_2 = \underline{\hspace{1cm}}\text{atm}, T_2 = 482.74\text{K}$

$P_2 =$ _____

$P_2 =$ _____

$P_1 = 7.23\text{atm}, T_1 = 736.38\text{K}$
 $P_2 = 6.19\text{atm}, T_2 = \underline{\hspace{1cm}}\text{K}$

$T_2 =$ _____

$T_2 =$ _____

$P_1 = 4.32\text{atm}$ $V_1 = 2.47\text{L}$
 $P_2 = 6.13\text{atm}$ $V_2 = \underline{\hspace{1cm}}$ L

$V_2 =$	

$V_2 =$	
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$V_1 = 0.84\text{L}$ $T_1 = \underline{\hspace{1cm}}$ K
 $V_2 = 1.35\text{L}$ $T_2 = 438.28\text{K}$

$T_1 =$	

$T_1 =$	
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$P_1 = \underline{\hspace{1cm}}$ atm $T_1 = 482.31\text{K}$
 $P_2 = 3.57\text{atm}$ $T_2 = 294.38\text{K}$

$P_1 =$	

$P_1 =$	
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$P_1 = 0.74\text{atm}$ $V_1 = 5.27\text{L}$
 $P_2 = \underline{\hspace{1cm}}$ atm $V_2 = 3.85\text{L}$

$P_2 =$	

$P_2 =$	
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