

Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 6F – Charles' and Gay-Lussac's Law

30 Points

Complete the following problems based on Charles' and Gay-Lussac's Law

Charles ($V_1T_2 = V_2T_1$) and Gay-Lussac's Law Forms ($P_1T_2 = P_2T_1$)

Charles' Law Forms	$V_1 = \frac{V_2T_1}{T_2}$	$T_1 = \frac{V_1T_2}{V_2}$	$V_2 = \frac{V_1T_2}{T_1}$	$T_2 = \frac{V_2T_1}{V_1}$
$V_1T_2 = V_2T_1$				

Gay-Lussac's Law Forms	$P_1 = \frac{P_2T_1}{T_2}$	$T_1 = \frac{P_1T_2}{P_2}$	$P_2 = \frac{P_1T_2}{T_1}$	$T_2 = \frac{P_2T_1}{P_1}$
$P_1T_2 = P_2T_1$				

$$V_1 = 9.54\text{L}, T_1 = \underline{\hspace{1cm}}\text{K}$$

$$V_2 = 7.45\text{L}, T_2 = 472.4\text{K}$$

$T_1 =$	

$T_1 =$	
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$$V_1 = \underline{\hspace{1cm}}\text{L}, T_1 = 134.49\text{K}$$

$$V_2 = 81.34\text{L}, T_2 = 374.12\text{K}$$

$V_1 =$	

$V_1 =$	
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$$V_1 = 15.12\text{L}, T_1 = 401.10\text{K}$$

$$V_2 = \underline{\hspace{1cm}}\text{L}, T_2 = 509.28\text{K}$$

$V_2 =$	

$V_2 =$	
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$$V_1 = 4.93\text{L}, T_1 = 382.45\text{K}$$

$$V_2 = 12.43\text{L}, T_2 = \underline{\hspace{1cm}}\text{K}$$

$T_2 =$	

$T_2 =$	
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$$P_1 = 3.88\text{atm}, T_1 = 606.42\text{K}$$

$$P_2 = 8.91\text{atm}, T_2 = \underline{\hspace{1cm}}\text{K}$$

$T_2 =$	

$T_2 =$	
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$$P_1 = 13.18\text{atm}, T_1 = 522.99\text{K}$$

$$P_2 = \underline{\hspace{1cm}}\text{atm}, T_2 = 744.28\text{K}$$

$P_2 =$	

$P_2 =$	
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$P_1 = 5.38\text{atm}, T_1 = \underline{\hspace{1cm}}\text{K}$ $P_2 = 6.84\text{atm}, T_2 = 643.58\text{K}$
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$T_1 =$		
$T_2 =$		

$P_1 = 3.82\text{atm}, T_1 = 213.38\text{K}$ $P_2 = \underline{\hspace{1cm}}\text{atm}, T_2 = 431.38\text{K}$
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$P_2 =$		
$P_2 =$		

$P_1 = 4.88\text{atm}, V_1 = \underline{\hspace{1cm}}\text{L}$ $P_2 = 7.86\text{atm}, V_2 = 68.33\text{L}$

$V_1 =$		
$V_2 =$		

$P_1 = 5.62\text{atm}, V_1 = 60.38\text{L}$ $P_2 = \underline{\hspace{1cm}}\text{atm}, V_2 = 34.31\text{L}$
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$P_2 =$		
$P_2 =$		