

## Quiz 9.1 – Gas Laws

Name: \_\_\_\_\_

**Problem 1**

A gas occupies  $2.50\text{ L}$  at  $0.95\text{ atm}$  of pressure and a temperature of  $274.5\text{ K}$ . After a change in  $P$ ,  $V$ , and  $T$  the new volume is  $5.45\text{ L}$  and the new pressure is  $0.67\text{ atm}$ . What is the new temperature?

**Problem 2**

A gas occupies  $1.75\text{ L}$  at  $1.24\text{ atm}$  of pressure and a temperature of  $12.4^\circ\text{C}$ . After a change in  $P$ ,  $V$ , and  $T$  the new volume is  $1.38\text{ L}$  and the new temperature is  $53.5^\circ\text{C}$ . What is the new pressure?

**Problem 3**

How many moles of gas are in each of the two gas samples from Problem 1 and Problem 2

## *Pioneers*

By Carol Lynn Pearson

My people were Mormon pioneers.  
Is the blood still good?  
They stood in awe as truth  
Flew by like a dove  
And dropped a feather in the West.  
Where truth flies you follow  
If you are a pioneer.  
I have searched the skies  
And now and then  
Another feather has fallen.  
I have packed the handcart again  
Packed it with the precious things  
And thrown away the rest.  
I will sing by the fires at night  
Out there on uncharted ground  
Where I am my own captain of tens  
Where I blow the bugle  
Bring myself to morning prayer  
Map out the miles  
And never know when or where  
Or if at all I will finally say,  
“This is the place,”  
I face the plains  
On a good day for walking.  
The sun rises  
And the mist clears.  
I will be all right:  
My people were Mormon Pioneers.