

Name: _____

Grade/Class: _____

Charles' Law Worksheet

****REMEMBER: You MUST show your work or you will NOT receive ANY credit!**

1) The temperature inside my refrigerator is about 4.0°C . If I place a balloon in my fridge that initially has a temperature of 22°C and a volume of 0.50 liters, what will be the volume of the balloon when it is fully cooled by my refrigerator?

2) A man heats a balloon in the oven. If the balloon initially has a volume of 0.40 liters and a temperature of 20.0°C , what will the volume of the balloon be after he heats it to a temperature of 250.0°C ?

3) On hot days, you may have noticed that potato chip bags seem to "inflate", even though they have not been opened. If I have a 250 mL bag at a temperature of 19.0°C , and I leave it in my car which has a temperature of 60.0°C , what will the new volume of the bag be?

4) A soda bottle is flexible enough that the volume of the bottle can change even without opening it. If you have an empty soda bottle (volume of 2.00 L) at room temperature (25.0°C), what will the new volume be if you put it in your freezer (-4.0°C)?