

## Ideal Gas Law Practice Worksheet

*Solve the following problems using the ideal gas law:*

- 1) How many moles of gas does it take to occupy 120 liters at a pressure of 2.3 atmospheres and a temperature of 340 K?
  
  
  
  
  
  
  
  
  
  
- 2) If I have a 50 liter container that holds 45 moles of gas at a temperature of 200<sup>o</sup> C, what is the pressure inside the container?
  
  
  
  
  
  
  
  
  
  
- 3) It is not safe to put aerosol canisters in a campfire, because the pressure inside the canisters gets very high and they can explode. If I have a 1.0 liter canister that holds 2 moles of gas, and the campfire temperature is 1400<sup>o</sup> C, what is the pressure inside the canister?
  
  
  
  
  
  
  
  
  
  
- 4) How many moles of gas are in a 30 liter scuba canister if the temperature of the canister is 300 K and the pressure is 200 atmospheres?
  
  
  
  
  
  
  
  
  
  
- 5) I have a balloon that can hold 100 liters of air. If I blow up this balloon with 3 moles of oxygen gas at a pressure of 1 atmosphere, what is the temperature of the balloon?