

### Big Gas Quiz Preparation

Consider a 100ml sample of hydrogen gas and a 100 ml sample of carbon dioxide at STP.

1. What is true about their kinetic energies?
2. What is the temperature of the gases?
3. Which is moving faster?
  
4. 2.0 liters of oxygen are generated at 22 °C and 615 mm Hg. What's the pressure of the dry gas?
  
5. At STP a sample of gas has a volume of 300 ml. If the temperature is increased to 130 °C, and volume is held constant, what is the new pressure of the gas?
  
6. If the pressure on a 250 ml sample of hydrogen gas at a constant temperature is increased from 325 mm Hg to 500 mm Hg, what will the final volume of the gas be?
  
7. A 250 ml sample of helium at STP is heated to 150 °C. If pressure is held constant, what's the new volume of the gas?
  
8. A sample of gas at STP has a volume of 10 L. What would the new volume be if the gas were heated to 350 K and pressure were reduced to 500 mm Hg?

Now consider a 500 ml can of spray paint.

9. If the can is heated by 15 C, the pressure of the gas inside the can will:
10. If the valve to the can is opened briefly, then closed. The pressure of gas in the can will:
11. After the valve was opened then closed, the volume of gas in the can will:

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