Chemistry CP

Name:

More Combined Gas Law Problems

Date:

1. A balloon on the top of a mountain on a Pacific island has a volume of 350 mL. The air pressure on this high peak is 675 mm Hg, and the air temperature is 15°C. What will the volume of the balloon be if brought down to the shore line (where the pressure is 1 atm), where the temperature is 29°C? (325 mL)

2. A gas sample has a volume of 3.66 L at a temperature of 100°C, and a pressure of 1500 mm Hg. What volume will it have at STP? (5.28 L)

3. A gas sample has a volume of 4500 mL at a temperature of 50°C and a pressure of 225 kPa. At what Celsius temperature will it have a volume of 2.00 L and a pressure of 1000 mm Hg? (-188°C)