

**Converting between Liters and Moles**

*Instructions: Read the following problems and complete the correct calculations. SHOW ALL WORK. Round to the nearest hundredths place.*

**Converting Moles to Liters**

1) What volume will 0.750 moles of nitrogen gas occupy?

2) What volume will 10.8 moles of O<sub>2</sub> gas occupy?

3) What volume will 4.5 moles of ammonia (NH<sub>3</sub>) occupy?

4) What volume will 0.478 moles of carbon tetrachloride gas occupy?

**Converting Liter to Moles**

5) How many moles are contained in 2.50 liters of methane (CH<sub>4</sub>)?

6) How many moles are contained in 324 liters of dinitrogen monoxide?

7) How many moles are contained in 24.5 liters of hydrobromic acid (HBr)?

8) How many moles are contained in 0.54 liters of sulfur dioxide (SO<sub>2</sub>)?