

Chemistry 22 Quiz #9

Name _____

Please answer questions on an 882-E scantron.

1. When 0.847 g of an unknown gas is contained solely in a 285 mL container, the pressure is 764 Torr at 19 degrees Celsius. What is the molar mass of the gas in grams/mole?

- a) 0.0012
- b) 32.00
- c) 70.90
- d) 28.01
- e) 2.016

2. For the reaction: $\text{SO}_{2(g)} + \text{H}_2\text{S}_{(g)} \rightleftharpoons 3\text{S}_{(s)} + 2\text{H}_2\text{O}_{(l)}$:

What volume (in liters) of Sulfur dioxide is needed to make 250 grams of Sulfur at STP?

- a) 1864.32
- b) 621.44
- c) 174.78
- d) 58.26
- e) 19.42

3. How many moles of N_2 gas are in 5 liters of air at STP? Consult table 11.1 on page 486.

- a) 0.174
- b) 0.223
- c) 4.48
- d) 6.25
- e) 112.0

4. If 5 liters of H_2S is heat from 20 to 100 degrees Celcius at constant pressure, what is the new volume?

- a) 1.00
- b) 3.94
- c) 25.0
- d) 6.25
- e) 0.25

5. What is the temperature in Kelvinof 2.6 moles of gas in 500 milliliters at 2.5 atmospheres?

- a) 0.171
- b) 0.223
- c) 5.86
- d) 6.25
- e) 17.1