

Assessment

Gases**Section Quiz: The Gas Laws**

In the space provided, write the letter of the term or phrase that best completes each sentence or best answers each question.

- _____ 1. For a fixed amount of gas at a constant temperature, the volume increases as the pressure
- remains steady.
 - increases.
 - decreases.
 - fluctuates.
- _____ 2. A sample of a gas occupies 250. mL at 1.00 atm of pressure. If the pressure increases to 2.00 atm while the temperature stays the same, what is the new volume?
500. mL
 - 1.00×10^3
 - 125 mL
 - 62.5 mL
- _____ 3. The direct relationship between temperature and volume is known as
- Kelvin's law.
 - Charles's law.
 - Boyle's law.
 - Avogadro's law.
- _____ 4. Raising the temperature of a gas from 0°C to 273°C at constant pressure causes the volume to
- increase 273-fold.
 - triple.
 - double.
 - decrease 273-fold.
- _____ 5. Absolute zero is equal to
- 273.15 K.
 - 273.15 K.
 - 273.15°C.
 - 273.15°C.

Section Quiz, continued

- _____ 6. The equivalent value of 273.15 K is
- 273.15°C.
 - 273.15°C.
 - 0°C.
 - 25°C.
- _____ 7. Gay-Lussac's law shows a direct relationship between temperature and
- volume.
 - composition.
 - density.
 - pressure.
- _____ 8. A graph of pressure versus temperature in kelvins of a gas at constant volume and fixed mass is a(n)
- downward curve.
 - upward curve.
 - straight line passing through the point (0,0).
 - straight line with a negative slope.
- _____ 9. The combined gas law is expressed by
- $P_1V_1 = P_2V_2$.
 - $\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$.
 - $\frac{P_1}{T_1} = \frac{P_2}{T_2}$.
 - $\frac{V_1}{T_1} = \frac{V_2}{T_2}$.
- _____ 10. Assuming all other conditions are constant, what is the new pressure of a gas if the original pressure is 50 kPa and the Kelvin temperature is doubled?
- 25 kPa
 - 50 kPa
 - 100 kPa
 - 200 kPa