

## Quiz for Video 6 – Gas Relationships

- How many torr is equivalent to 1 atmosphere?
  - 1 torr
  - 101 torr
  - 760 torr
  - Not enough info
- Pressure and Temperature have a \_\_\_\_\_ relationship. This means as Temperature increases, pressure \_\_\_\_\_.
  - Direct, increases
  - Direct, decreases
  - Indirect, increases
  - Indirect, decreases
- True or false: the ideal gas law assumes that all gas particles behave the same, regardless of identity.
  - True
  - False
- True or false: the ideal gas law assumes that all gas particles have the same mass.
  - True
  - False
- If I combine a 1L sample of oxygen at 0.44 atm with a 1L sample of nitrogen at 0.26 atm into a new 1L container, what will the total pressure be in the new container?
  - Less than 0.70 atm
  - 0.70 atm
  - More than 0.70 atm
- If I have a reaction that has created 2.0L of gas at 350K and 1.0 atm, which equation should I use to determine the moles of gas produced?
  - The Ideal Gas Law ( $PV=nRT$ )
  - Boyle's Law ( $P_1V_1 = P_2V_2$ )
  - Charles's Law ( $V_1/T_1 = V_2/T_2$ )
  - Avogadro's Law ( $V_1/n_1 = V_2/n_2$ )
- For the problem above (Problem 6), how many moles of gas are produced?
  - 0.0696 moles
  - 0.08206 moles
  - 1 mole
  - 2.0 moles
- If I have a rigid, sealed container, which gas variables will not be able to change.
  - Volume & Pressure (V, P)
  - Pressure & Moles (P, n)
  - Pressure & Temperature (P, T)
  - Volume & Moles (V, n)
- If I have a flexible, sealed container, which gas variables will be unable to change?
  - Volume & Pressure (V, P)
  - Pressure & Moles (P, n)
  - Pressure & Temperature (P, T)
  - Volume & Moles (V, n)
- When I drive a long distance I notice my tire pressure increases. Why is this?
  - Moles of gas in the tire has increased
  - Volume of the tire has decreased
  - Temperature of the tire has increased
  - The ideal gas law is not obeyed