1) What is an assumption of the Kinetic-Molecular Theory of Gases?
(A) Gases have a very low mass.
(B) Gas particles are colliding with other gas particles with inelastic collisions.
(C) Gas particles essentially have a very small volume.
(D) Gas particles essentially have no intermolecular attractions.


$$
\begin{aligned}
& \mathrm{V}=22.4 \mathrm{~L} \\
& \mathrm{~T}=273 \mathrm{~K} \\
& \mathbf{P}=1 \mathrm{~atm}
\end{aligned}
$$


$\mathrm{V}=22.4 \mathrm{~L}$
$\mathrm{T}=273 \mathrm{~K}$
$\mathrm{P}=1 \mathrm{~atm}$

$\mathrm{V}=22.4 \mathrm{~L}$
$\mathrm{T}=273 \mathrm{~K}$
$P=1 \mathrm{~atm}$
2) Which gas would have the greatest number of particles?
(A) He
(B) $\mathrm{O}_{2}$
(C) Rn
(D) They all have the same amount.

(A)

(B)

(C)

(D)
3) Which graph above shows the relationship between pressure and temperature?
4) Which graph above shows the relationship between volume and temperature?
5) Which graph above shows the relationship between pressure and temperature?
(A) Graph A
(B) Graph B
(C) Graph C
(D) Graph D
6) What is the temperature of a gas a measurement of?
(A) The speed of a gas
(B) The number of gas particles
(C) The kinetic energy of a gas
(D) The number of collisions of the gas with the sides of the container.
7) What is the pressure of a gas a measurement of?
(A) The speed of a gas
(B) The number of gas particles
(C) The kinetic energy of a gas
(D) The number of collisions of the gas with the sides of the container.
8) What is the volume of a gas a measurement of?
(A) The size of the particles
(B) The size of the container
(C) The speed of the particles
(D) The size of a mole of particles

## Questions 9-11 refer to the following: A sample of Helium gas is at $\mathbf{3 . 0} \mathbf{~ a t m}$ in a 4.0 L container and at

 300 K.9) What will the new pressure be if the volume is changed to 12 L ?
(A) 0.5 atm
(B) 1.0 atm
(C) 1.5 atm
(D) 2.0 atm
10) What will the new pressure be if the temperature is raised to 600 K ?
(A) 1.5 atm
(B) 3.0 atm
(C) 6.0 atm
(D) 9.0 atm
11) What will be the new volume if the temperature is lowered to 150 K ?
(A) 1.0 L
(B) 2.0 L
(C) 4.0 L
(D) 8.0 L

## 8TH GRADE SCIENCE - WEEK 23

12) What gas makes up $78 \%$ of our atmosphere on Earth?
(A) $\mathrm{N}_{2}$
(B) $\mathrm{O}_{2}$
(C) $\mathrm{CO}_{2}$
(D) $\mathrm{H}_{2}$
13) How many bonds does an oxygen gas molecule have?
(A) Single bond
(B) Double bond
(C) Triple bond
(D) Quadruple bond
14) Label the diagram below in the correct order

15) Enter one of the four major chemical compounds that are pollutants in our atmosphere.
