



Charles' Law
12 Questions

NAME : _____

CLASS : _____

DATE : _____

1. What is the formula for Boyle's Law?

☐ A $P_1V_1=P_2V_2$

☐ B $P_1V_2=P_2V_1$

☐ C P_1V_1/P_2V_2

☐ D $P_1/V_1=P_2/V_2$

2. There are 40 liters of helium in a balloon at 100 K. If the temperature of the balloon is increased to 200 K, what will the new volume of the balloon be?

☐ A 45 L

☐ B 45.33 L

☐ C 80 L

☐ D 54 L

3. What is the formula Charles' Law?

☐ A $T_1/V_1=T_2/V_2$

☐ B $V = T$

☐ C $V_1/T_1=V_2/T_2$

☐ D $VT = VT$

4. What is 50 C in Kelvin?

☐ A 323

☐ B 100

☐ C 223

☐ D 50

5. If 200 L of a gas at 27°C is cooled to -33°C at a constant pressure, the volume will be

☐ A 250 L

☐ B 196 L

☐ C 160 L

☐ D 204 L

6. The volume of a sample of a gas at 273 °C is 200 liters. If the volume is decreased to 100 liters at constant pressure, what will be the new temperature of the gas?
- ☐ A 546 K ☐ B 273 K
- ☐ C 100 K ☐ D 0 K
7. There are 40 liters of helium in a balloon at 100 K. If the temperature of the balloon is increased to 200 K, what will the new volume of the balloon be?
- ☐ A 45 L ☐ B 80 L
- ☐ C 45.33 L ☐ D 54 L
8. Charles' Law deals with what quantities?
- ☐ A volume/temperature/pressure ☐ B pressure/volume
- ☐ C volume/temperature ☐ D pressure/temperature
9. If the Kelvin temperature of a gas is doubled, the volume of the gas will increase by ____.
- ☐ A A factor of 2 ☐ B A factor of 1
- ☐ C A factor of 3 ☐ D A factor of 0.5
10. 4. Charles' Law states that as the temperature increases the volume decreases at constant pressure.
- ☐ A TRUE ☐ B FALSE
11. 5. The graph of gas' volume vs. temperature in kelvin scale at constant pressure is a curve line.
- ☐ A FALSE ☐ B TRUE
12. 5. What is the unit for temperature under Charles' Law?
- ☐ A D.Rankine ☐ B b. Celcius
- ☐ C c. Fahrenheit ☐ D a. Kelvin

