



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
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11. 5. The graph of gas' volume vs. temperature in kelvin scale at constant pressure is a curve line.

☐ A	FALSE	☐ B	TRUE
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12. 5. What is the unit for temperature under Charles' Law?

☐ A	D.Rankine	☐ B	b. Celcius
☐ C	c. Fahrenheit	☐ D	a. Kelvin

