Gas Law Quiz: Who Did It?

Match the numbered items with the choices on the right. Then use words and names from the numbered choices to fill in the blanks on The Kilroy Caper mystery.

1. PV / T = k
2. A sample of gas has a temperature of 27°C, a pressure of 3 atm., and a volume of 5 liters. What would be the new temperature if the new volume is 4 liters and the new pressure is 5 atm,.?
3. Kinetic energy
4. STP
5. 16 grams of O_2 at STP occupies how many liters?
6. V / T = k
7. P V = k
8. Molar volume at STP
9. A balloon has a volume of 20 liters at 336.5°C. What is the temperature (in °C) if the volume expands to 40 liters?
10. Ideal gas law
11. Given PV = nRT
12. Unit for volume
13. Change 273 K to Celsius
14. Units of pressure
15. 2 moles of O_2 occupy ___ liters at STP
16. Unit of mass
17. A device used for measuring pressure
18. A gas occupies 10 cm^3. What would be its new volume if the temperature is increased from 20°C to 313°C?
19. If a gas has an initial pressure of 76 atm and initial volume of 5 liters, what is the final volume if the pressure is increased to 228 atm?
20. Unit of temperature
21. Change 27°C to K
22. - 273°C

Answers:

0°C, 1 atm: THE CLASS BULLY

22.4L: PRIVATE DETECTIVE

Boyle's Law: PRIVATE DETECTIVE

Charles' Law: LAST

Combined Gas Law: TIME TO

½ mv^2: student 2: THE EGG HEAD

300 Kelvin: RETURN

0°C: Student 6: THE ARTIST

PV = nRT: LAST

PV/nT: AFTER

44.8L: BEFORE

1.67 Liters: AFTER

20 Liters: FIRST ONE

400 Kelvin: Student 5: THE CLASS PESIDENT

946°C: Student 3: THE SCHOOL'S TOP ATHLETE

atm: Student 1: THE CUNNING TEST TAKER

liters: Student 2: THE EGG HEAD

grams: Student 3: THE SCHOOL'S TOP ATHLETE

Kelvin: Student 4: THE CLASS BULLY

Barometer : Student 5: THE CLASS PRESIDENT

11.2 liters: Student 1: THE CUNNING TEST TAKER

Absolute Zero: NOT LAST