

Ap chemistry ideal gas law problems flashcard



**ASSIGN
BUSTER**

What pressure is required to contain 0.023 moles of nitrogen gas in a 4.2 L container at a temperature of 20.

C? 2. Oxygen gas is collected at a pressure of 123 spa in a container, which has a volume of 10.0 L. What temperature must be maintained on 0.

500 moles of this gas in order to maintain this pressure? Express the temperature in degrees Celsius. 3. How many moles of chlorine gas would occupy a volume of 35.5 L at a pressure of 100.0 spa and a temperature of 100. DC? After determining the number of moles, calculate the number of grams of chlorine (CA) contained in this container? What is the volume of a balloon if it contains 3.

2 moles of helium at a temperature of 20. CO and standard pressure? 5.

Calculate the volume which 1.00 mole of a gas occupies at STEP.

6. What volume wool of 105 spa? O Go CA occupy at a temperature to 25 DC and a pressure 7. A 23. G sample of an unknown gas occupies a volume of 12.0 L at standard temperature and pressure.

What is the molecular mass of this gas? 8. What mass of nitrous oxide gas (NON) is contained in 20.0 L balloon at a pressure of 110.0 spa and a temperature of 25 DC? 9. What pressure would be required to contain 100.

0 Goff ASS gas in a 25.

L container at a temperature of 100. DC? 10. What pressure would a sample of gas have if the volume is 10.

0 L the number of gas particles is 0. 10 moles, and the temperature is 500. Kelvin? 11 What volume would a sample of gas have if the pressure is 8. 2 ATM, the number of gas particles is 2. 0 moles, and the temperature is -73 degrees Celsius? 13. 12.

14. 15. 16. 17.

18. 19. 20. 22. 00 Goff CA has a volume of 50. 00 L and a pressure of 0.

8210 ATM. What must be the 21. Temperature of the gas? 24. 25.

26. 27. 28. 29. 31 .

How many grams are in a sample of oxygen gas if the pressure is 1, 520 mm Hg, the volume is 32. , 200 ml, and the temperature is -73 degrees Celsius? 33. 35. 37.

39. 41 . Modern vacuum techniques make it possible to reach a pressure of 1.00×10^{-10} laboratory system.

What volume in millimeters would 1.00×10^6 mm Hg Nina 42. Molecules of gas occupy at 43. This pressure and standard temperature? 45. 47. 49.

50. 51. 52. 53.

What volume would be occupied by 100. G of oxygen gas at a pressure of 1. 50 ATM and a temperature of 25 co? 54. 55. 56.

An air-filled balloon has a volume of 225 L at 0. 940 ATM and 25 co. Soon after, the pressure changes to 0 ATM and new volume of the balloon? 57. 58. 9.

61. 62. He temperature changes to $0\text{ }^{\circ}\text{C}$. A gas confined in a 515 cm^3 container exerts a pressure of 107.4 spa at $38.6\text{ }^{\circ}\text{C}$.

At what Celsius temperature will it exert a pressure of 635.7 spa if it is placed into a 644 cm^3 container? 66. 67. 69. 70.

71. 72. 73. 74.

A balloon is inflated with 0.2494 g of helium to a pressure of 1.26 ATM . If the desired volume of the balloon is 1.250 L , what must the temperature be in $^{\circ}\text{C}$? 75. 76.

78. 79. 81. 82.

83. A welder's acetylene tank has a volume of 75.0 L . It is stored at a temperature of $23.24\text{ }^{\circ}\text{C}$ and has a pressure of 7667 spa . How many moles of acetylene are in the tank?

? 4. 85. 87. 89. 91.

92. How many grams of argon would it take to fill a light bulb with a volume of 0.475 L at $25\text{ }^{\circ}\text{C}$? 93. 95. 97.

100. Dry ice is carbon dioxide in the solid state. 1.28 g of dry ice are placed into a 5.00 L evacuated chamber that is maintained at $35.1\text{ }^{\circ}\text{C}$.

What is the pressure in the chamber in spa after all the dry ice has sublimed into CO_2 gas? 101. 102. 103. 104.

105. 106. 107. 108. A sample of BRB gas is loaded into an evacuated demonstration bottle at $25\text{ }^{\circ}\text{C}$. The volume of the bottle is 0.250 L .

25 L. How many moles of BRB gas will be contained in the bottle? 109. 110.
111.

12. 13. 114. 115. A sample of gas occupies . 308 mm at a temperature of
325 K and a pressure of 149 spa.

Calculate the number of moles of the gas that are present. 116. 117. 118.
119.

120. 121. 122. What pressure is exerted by 0. 625 moles of a gas in a 45. 4 L
container at -24.

0 CO? 123. 124. 125. 126.

127. 128. 129. Calculate how many grams of methane (CHI) are in a sealed
800.

MI flask at room temperature (22 co) and 780. Mm of pressure. 130. 131.
132.

133. 134. 135. 136. 137. Calculate how many grams of hydrogen can be
burned if 40.

Liters of oxygen at 200. K and 1. 0 ATM. 138.

139. 140. 141.