

Physics 151 Class Exercise: Ideal Gas Las

1. The Goodyear blimp *Spirit of Akron* is 62.6 m long and contains 7023 m^3 of helium. When the temperature of the helium is $12 \text{ }^\circ\text{C}$ its gauge pressure is 11 kPa. Find the mass of the helium in the blimp and estimate the number of helium atoms.



Answer:	
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Answer:	
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2. A balloon contains 3.0 liters of nitrogen gas at a temperature of 87 K and a pressure of 101 kPa. If the temperature of the gas is allowed to increase to 23 °C and the pressure remains constant, what volume will the gas occupy?

Answer:	
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