

# Quiz Chapter 4

## The Properties of Mixtures

by  
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# Quiz 1

- A gas at 250 K and 15 atm has a molar volume 12% smaller than that calculated from the perfect gas law. Calculate
- a) The compression factor under these condition (ans: 0.88)
- b) The molar volume of the gas (ans: 1.2 L/mol)



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# Quiz 2

- A vessel of volume  $24.4 \text{ dm}^3$  contains  $1.0 \text{ mol H}_2$  and  $2.5 \text{ mol N}_2$  at  $298.15 \text{ K}$ . Compute the following process
  - a) Each component with the following mole fraction  
(Ans:  $\text{H}_2=0.286$ ,  $\text{N}_2=0.714$ )
  - b) Their partial pressure  
(Ans:  $\text{H}_2: 101.6 \text{ kPa}$ ,  $\text{N}_2=254.5\text{kPa}$ )
  - c) Their total pressure  
(Ans:  $355.4 \text{ kPa}$ )



# Authors Information

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