

## Answer to Question #62461, Chemistry / General Chemistry

what is the partial pressure of carbon monoxide gas in a sealed vessel that has a total pressure of 2.68 atm and partial pressures of 1.56 atm for oxygen and 0.65 atm for carbon dioxide?

**Answer:**

If system contain only CO+O<sub>2</sub>+CO<sub>2</sub>, so

$$\begin{aligned}p_{total} &= p_{CO} + p_{O_2} + p_{CO_2} \\2.63 \text{ atm} &= p_{CO} + 1.56 \text{ atm} + 0.65 \text{ atm} \\p_{CO} &= 2.63 \text{ atm} - 1.56 \text{ atm} - 0.65 \text{ atm} = 0.42 \text{ atm}\end{aligned}$$

$$\mathbf{p_{CO} = 0.42 \text{ atm}}$$

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