Name		Chemistry		//
1. A rigid 5.00 L cylinder contains 2 (a) Calculate the total pressure, in atm (b) The temperature of the gas mixtur (i) The mole fraction of N ₂ (x (ii) The partial pressure, in a	n, of the gas mixture in the cylinder is decreased in the cylinder	he cylinder at 298 K. eased to 280 K. Calcula		
(c) If the cylinder develops a pinhole			capes, would the ratio	$\frac{moles: Nitrogen}{moles: Oxygen} \text{ in the}$
cylinder increase, decrease, or remain	the same? Justify your	answer.		
A different rigid 5.00 L cylinder cont reaction occurs to produce NO ₂ (<i>g</i>). (d) Write the balanced equation for th (e) Calculate the total pressure, in atm	ne reaction.			ded to the cylinder, where a

indicated in (i) I modene (ii) modene (iii) specifiii) that	of $CO(g)$ and $CO_2(g)$ are placed in 1 L containers at the conditions the diagram to the right. Indicate whether the average kinetic energy of the $CO_2(g)$ decules is greater than, equal to, or less than the average kinetic ergy of the $CO(g)$ molecules. Justify your answer. Indicate whether the root-mean-square speed of the $CO_2(g)$ decules is greater than, equal to, or less than the root-mean-square end of the $CO(g)$ molecules. Justify your answer. Indicate whether the number of $CO_2(g)$ molecules is greater in, equal to, or less than the number of $CO(g)$ molecules. Justify ranswer.	CO gas lel 2 atm 25°C	CO ₂ gas latm 25°C

