1. Given the phase diagram for carbon dioxide, illustrated above, state what phase or phases of CO₂ are present at each of the following temperature-pressure conditions. Circle the answer(s).

a) at any point on between A and X on curve AX:  S  L  G
b) at point X:  S  L  G
c) at 0 °C and 5.11 atm:  S  L  G
d) at -78 °C and 1 atm:  S  L  G

2. Based on the phase diagram above, what effect would each of the following changes have on a sample of CO₂ at point D? Fill in the blanks.

a) increasing the temperature to 0 °C at constant pressure:  It changes from  to 

b) decreasing the pressure to 0.300 atm at constant temp.:  It changes from  to 

3. When CO₂ is a solid it is called “dry ice”. What type of intermolecular forces of attraction is responsible for holding CO₂ molecules together with other CO₂ molecules in dry ice? Circle the answer.

Intermolecular forces of attraction  Intramolecular forces of attraction
1. Given the phase diagram for carbon dioxide, illustrated above, state what phase or phases of CO₂ is/are present at each of the following temperature-pressure conditions. Circle the answer(s).

   a) at any point on between A and X on curve AX:  \( \text{S} \quad \text{L} \quad \text{G} \)
   b) at point X:  \( \text{S} \quad \text{L} \quad \text{G} \)
   c) at 0 °C and 5.11 atm:  \( \text{S} \quad \text{L} \quad \text{G} \)
   d) at -78 °C and 1 atm:  \( \text{S} \quad \text{L} \quad \text{G} \)

2. Based on the phase diagram above, what effect would each of the following changes have on a sample of CO₂ at point D? Fill in the blanks.

   a) increasing the temperature to 0 °C at constant pressure: It changes from \( \text{S} \) to \( \text{L} \)
   b) decreasing the pressure to 0.300 atm at constant temp.: It changes from \( \text{S} \) to \( \text{G} \)

3. When CO₂ is a solid it is called “dry ice”. What type of intermolecular forces of attraction is responsible for holding CO₂ molecules together with other CO₂ molecules in dry ice? Circle the answer.

   Intermolecular forces of attraction  Intramolecular forces of attraction