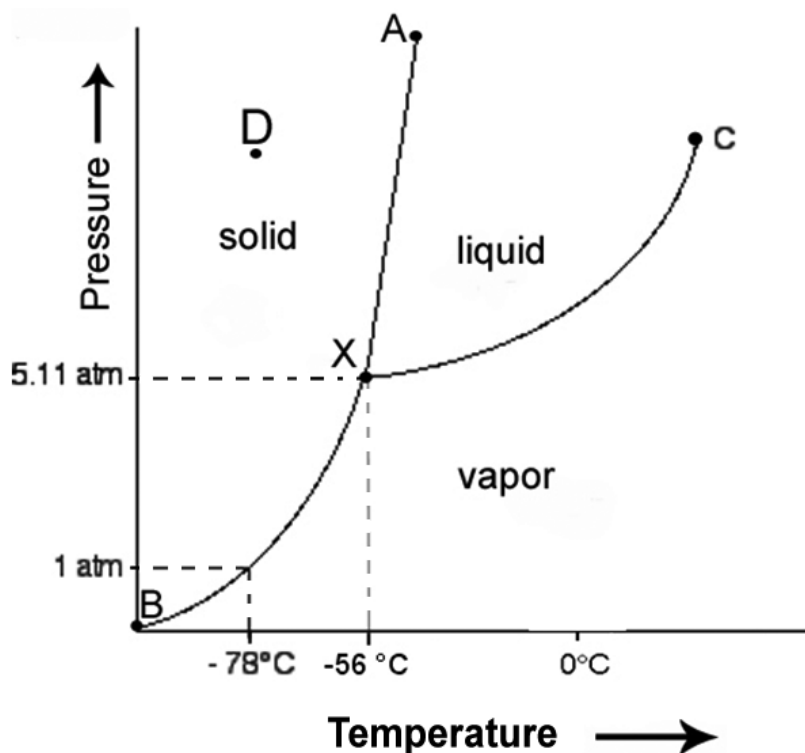


General Chemistry  
Mr. MacGillivray  
Quiz #28:  
Phase Diagrams

## Phase Diagram for CO<sub>2</sub>



1. . Given the phase diagram for carbon dioxide, illustrated above, state what phase or phases of CO<sub>2</sub> 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: | <b>S</b> | <b>L</b> | <b>G</b> |
| b) at point X                                   | <b>S</b> | <b>L</b> | <b>G</b> |
| c) at 0 °C and 5.11 atm                         | <b>S</b> | <b>L</b> | <b>G</b> |
| d) at -78 °C and 1 atm                          | <b>S</b> | <b>L</b> | <b>G</b> |

2. Based on the phase diagram above, what effect would each of the following changes have on a sample of CO<sub>2</sub> 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 CO<sub>2</sub> is a solid it is called “dry ice”. What type of intermolecular forces of attraction is responsible for holding CO<sub>2</sub> molecules together with other CO<sub>2</sub> molecules in dry ice? Circle the answer.

Intermolecular forces of attraction

Intramolecular forces of attraction