Name: _____

Block: _____

Phase Diagrams

Answer these questions based on the phase diagrams for water and carbon dioxide.

1. What pressure would be necessary to boil water at a temperature of 77°C?

2. What is the minimum pressure necessary for water to exist as a liquid at that temperature?

3. At what temperature would water boil at a pressure of 10 atm?

4. What is the hottest temperature at which carbon dioxide can exist as a liquid?

5. At 1.0 bar of pressure, what is the temperature at which carbon dioxide sublimes?

6. At room temperature (25°C), what is the minimum pressure at which liquid carbon dioxide can exist?

7. Describe the phase transitions and temperatures for water going from 200 K to 400 K at a pressure of 0.1 atm.

8. Describe the phase transitions and temperatures for carbon dioxide going −60°C to 0°C at a pressure of 10.0 bar.