

Name: _____

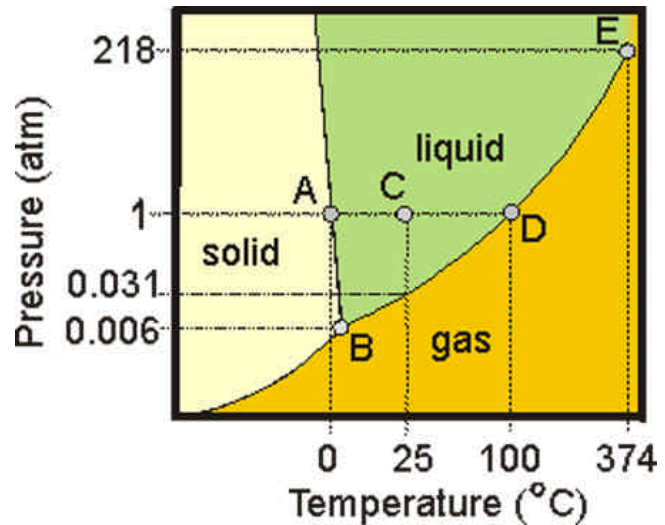
Period: _____ Subject: _____

Date: _____

Phase Diagrams

Questions #1-5 refer to the phase diagram for water (shown to the right).

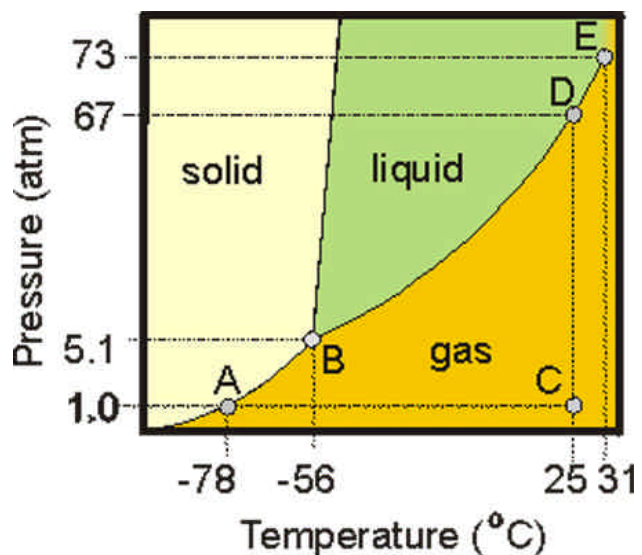
Phase Diagram - Water



1. Which letter (A-E) represents the “triple point”? What does the “triple point” mean?
2. At what pressure can water boil at room temperature (25 EC)?
3. What phase is water found in at room temperature and 1 atmosphere pressure?
4. Water exists in what phase(s) at STP (Standard Temperature and Pressure)?
5. Which of the following phase changes (sublimation, deposition, melting, freezing, condensation, vaporization) occur along the curve BDE?

Phase Diagram - Carbon Dioxide

Questions #6-10 refer to the phase diagram for carbon dioxide (shown to the right).



6. At 1 atmosphere pressure, what phases does CO_2 pass through as the temperature increases? Which phase change(s) does this include?
7. Which letter signifies the “critical point”? What does the critical point mean?
8. CO_2 exists as a gas at room temperature. How much pressure would have to be applied to turn CO_2 into a liquid at room temperature?
9. At what temperature would CO_2 sublime at sea level (1 atm pressure)?
10. What phase change(s) occur across the curve AB in the phase diagram for CO_2 ?