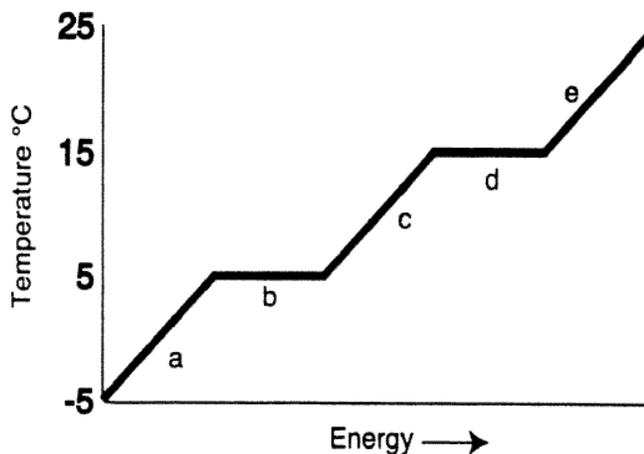


Warm-Up #44

Name: _____ Date: _____

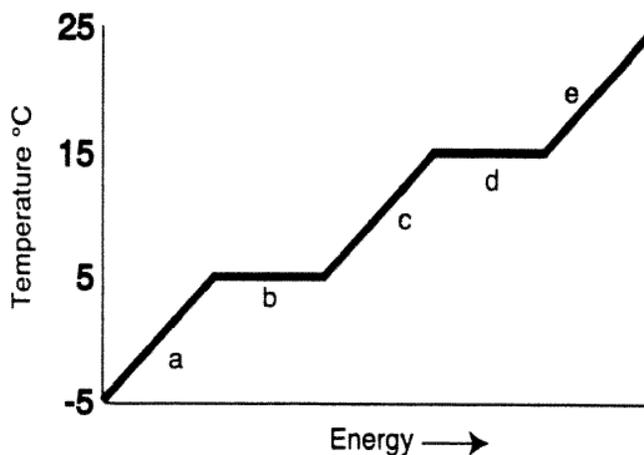
1. What letter represents condensation?
2. What letter represents melting?
3. What is the freezing point of the substance?
4. What is the boiling point of the substance?
5. What letter(s) shows a change in kinetic energy?
6. As heat is added to a substance undergoing a substance change, the temperature remains constant because the energy is being used to –
 - a. break covalent bonds
 - b. lower the specific heat capacity
 - c. overcome intermolecular forces
 - d. oppose electron cloud repulsions



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- Which substance requires the greatest amount of heat to melt a 1.00 mol sample?
- Which substance will release the greatest amount of heat when 1.00 mol is frozen?
- Place the substances in order of increasing strength of intermolecular forces in the solid state.
- Is freezing (solidification) an endothermic or exothermic process?
- Using the table, calculate the amount of heat released when 3.00 mol of water is frozen.
- Using the table, calculate the mass of mercury that can be melted when 14.61 kJ of heat is applied.

Molar Heat of Fusion and Melting Point for Selected Substances

Substance	Melting Point (°C)	ΔH_{fus} (kJ/mol)
Argon	-190	1.18
Benzene	5.5	9.87
Mercury	-39	2.29
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