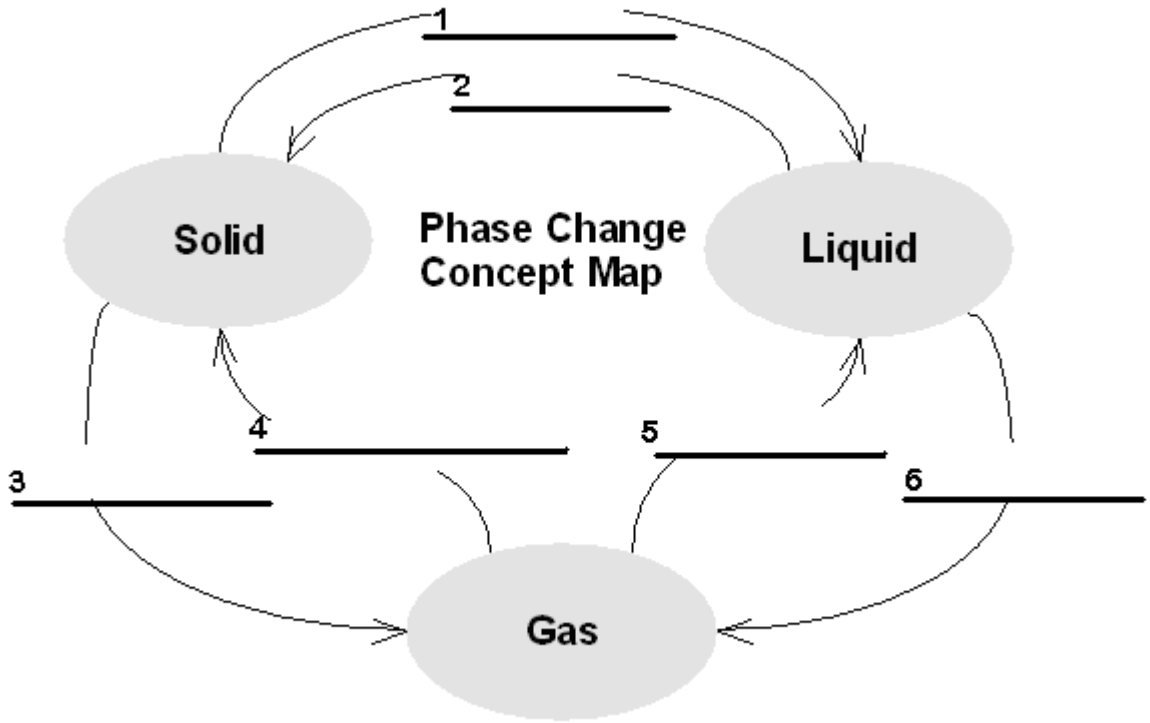
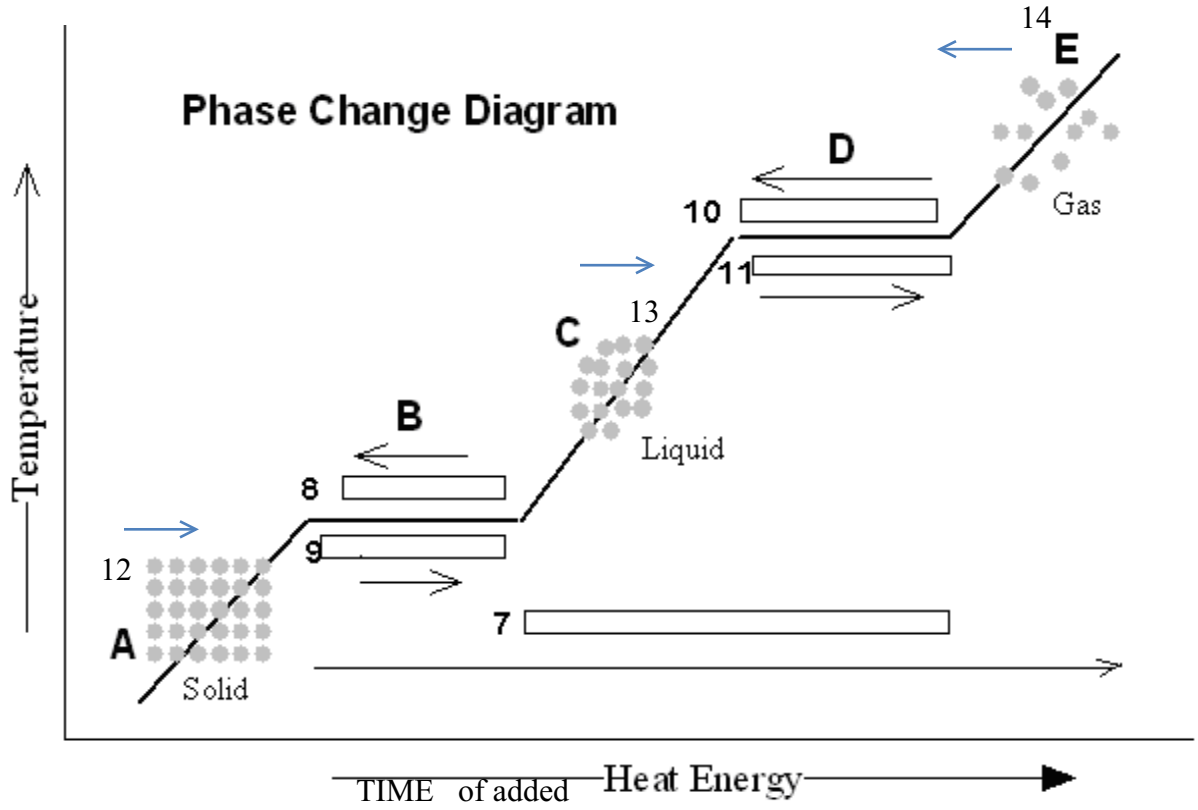
Phase Changes Worksheet **Name _____**

Fill in the phase changes in the blank provided.





For each Number Indicate:

a) What phase or phases are present?
b) Is a phase change taking place? If so name the phase change.
c) Is energy be added or released?
d) Is potential energy increasing, decreasing or staying the same?
e) Is the particle distance increasing, decreasing or staying the same?
f) Is Kinetic energy increasing decreasing or staying the same?
g) Is the particle speed increasing, decreasing or staying the same?

1.

2.

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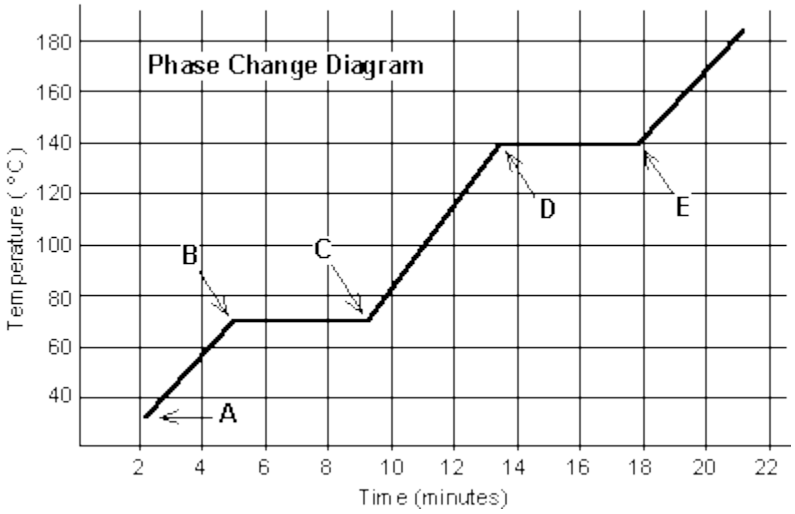
14.



The graph was drawn from data collected as a substance was heated at a constant rate. Use the graph to answer the following questions.

At **point A**, the beginning of observations, the substance exists in a solid state. Material in this phase has _____ volume and _____ shape. With each passing minute, _____ is added to the substance. This causes the molecules of the substance to _____ more rapidly which we detect by a _____ rise in the substance.

At **point B**, the temperature of the substance is _____°C. The solid begins to _____.

At **point C**, the substance is completely _____ or in a _____ state. Material in this phase has _____ volume and _____ shape. The energy put to the substance between minutes 5 and 9 was used to convert the substance from a _____ to a _____. Between 9 and 13 minutes, the added energy increases the _____ of the substance.

During the time from **point D to point E**, the liquid is _____. By **point E**, the substance is completely in the _____ phase. Material in this phase has _____ volume and

_____ shape. The energy put to the substance between minutes 13 and 18 converted the substance from a _____ to a _____ state.

Beyond **point E**, the substance is still in the _____ phase, but the molecules are moving _____ as indicated by the increasing temperature.

Substance	Melting point	Boiling point
Bolognium	20 °C	100 °C
Unobrainium	40 °C	140 °C
Flubium	70 °C	140 °C

Which of these three substances was likely used in this phase change experiment?