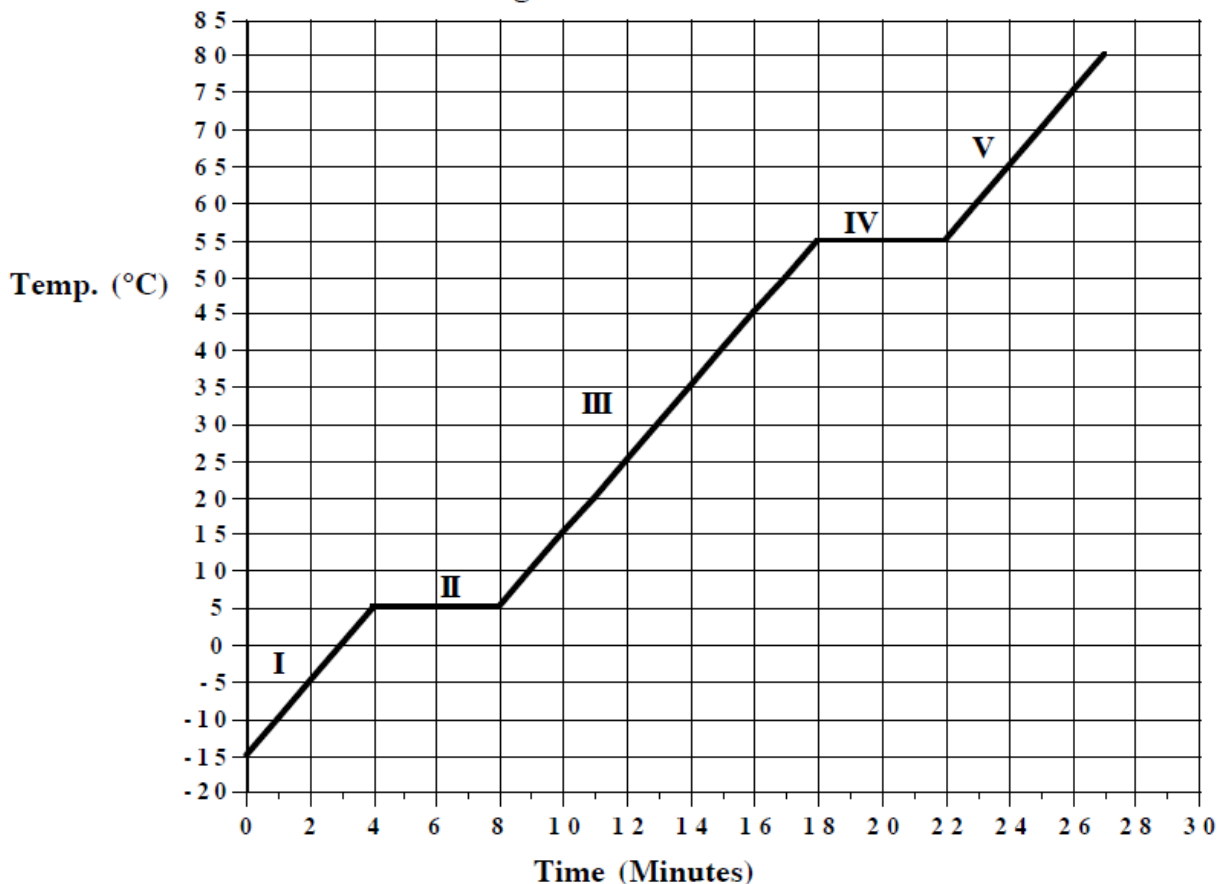


# Heating Curves Worksheet

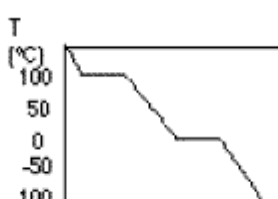
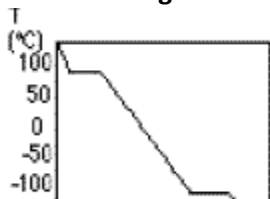
Heating Curve of Substance X



The heating curve shown above is a plot of temperature vs time. It represents the heating of substance X at a constant rate of heat transfer. Answer the following questions using this heating curve:

- \_\_\_\_\_ 1. In what part of the curve would substance X have a definite shape and definite volume?
- \_\_\_\_\_ 2. In what part of the curve would substance X have a definite volume but no definite shape?
- \_\_\_\_\_ 3. In what part of the curve would substance X have no definite shape or volume?
- \_\_\_\_\_ 4. What part of the curve represents a mixed solid/liquid phase of substance X?
- \_\_\_\_\_ 5. What part of the curve represents a mixed liquid/vapor phase of substance X?
- \_\_\_\_\_ 6. What is the melting temperature of substance X?
- \_\_\_\_\_ 7. What is the boiling temperature of substance X?

Circle the correct cooling curve for water.



\_\_\_\_\_ 8. In what part(s) of the curve would increasing kinetic energy be displayed?

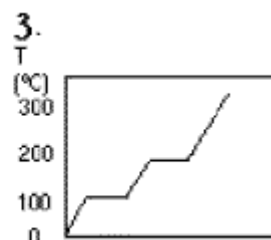
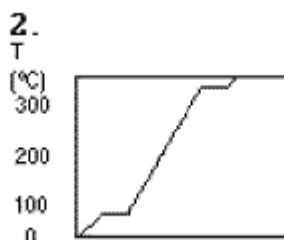
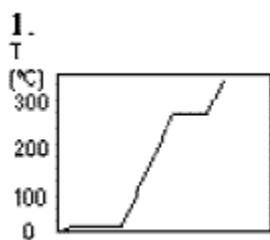
\_\_\_\_\_ 9. In what part(s) of the curve would increasing potential energy be displayed?

\_\_\_\_\_ 10. In what part of the curve would the molecules of substance X be farthest apart?

\_\_\_\_\_ 11. In what part of the curve would the molecules of X have the lowest kinetic energy?

\_\_\_\_\_ 12. In what part of the curve would the molecules of X have the greatest kinetic energy?

Substance	Melting/Freezing Point (°C)	Boiling/Condensation Point (°C)
ammonia	-77.7	-33.3
carbon dioxide	-78.5	-78.5
copper	1083.0	2566.0
ethanol	-114.4	78.5
glycerin	20.0	290.0
gold	1064.0	2807.0
iodine	113.5	184.4
mercury	-38.9	356.6
sodium chloride	801.0	1413.0
stearic acid	71.5	360.0
tin	232.0	2270.0
pure water	0.0	100.0



13. Which of the graphs above most likely represents iodine? \_\_\_\_\_

14. Which of the graphs above most likely represents steric acid? \_\_\_\_\_

15. Which of the graphs above most likely represents glycerin? \_\_\_\_\_