

2. A 0.085 kg sample of mercury is heated from 25°C to 500°C.
- (a) Sketch the heating curve for the above process. Label the starting temperature, melting point, boiling point, and final temperature on the y -axis.
- (b) Calculate the heat required for each step of the heating curve, and the total heat required.

30.12 kJ

3. An 0.045 kg block of silver at a temperature of 22°C is heated with 20.0 kJ of energy. Calculate the total heat required by calculating the heat for each step until the entire 20.0 kJ is accounted for.

What is the final temperature and what is the physical state (solid, liquid, gas) of the silver at that temperature?

liquid

1 369°C