

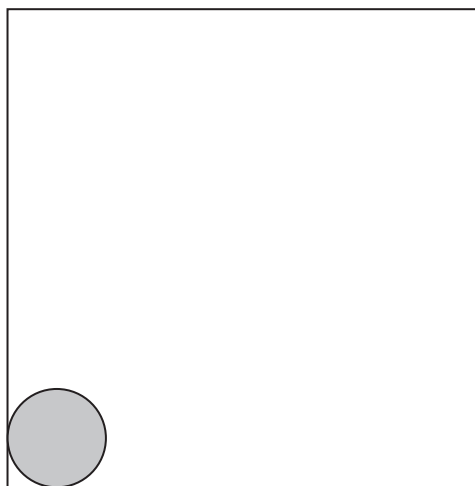
- 3** A sample of liquid gallium is allowed to cool in a laboratory.

The liquid gallium freezes to become a solid.

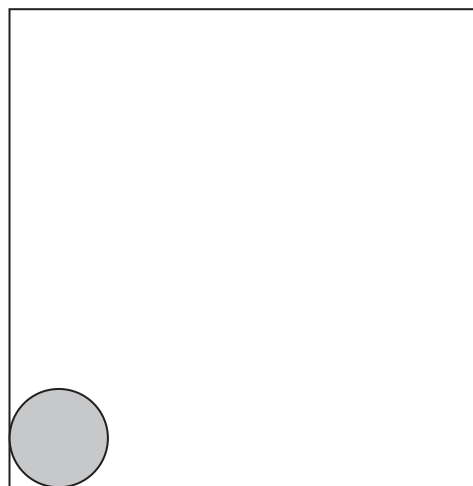
- (a) Complete the diagram by drawing the arrangement of particles in a liquid and the arrangement of particles in a solid.

The first particle in each box has been drawn for you.

(4)



Liquid



Solid

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

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(b) The initial temperature of the sample of liquid gallium is 80°C .

The freezing temperature of gallium is 30°C .

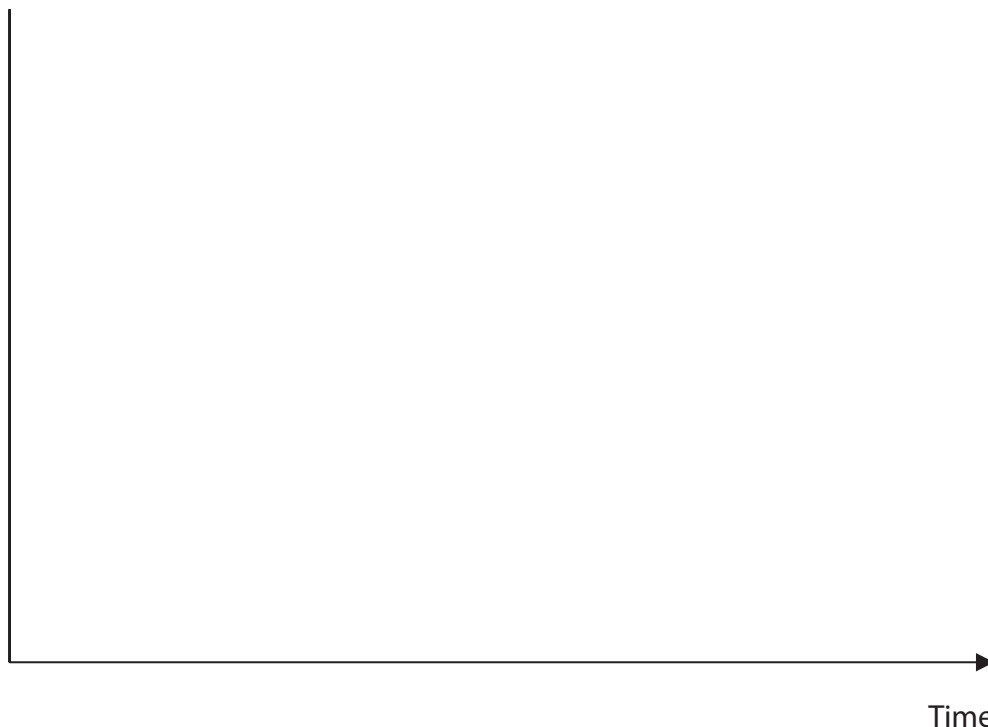
The final temperature of the solid gallium is 20°C .

Complete the graph to show how the temperature of the gallium changes during the time that it cools to 20°C .

Add appropriate values to the temperature axis.

(3)

Temperature
in $^{\circ}\text{C}$



(Total for Question 3 = 7 marks)

