

**Paper Reference(s) 4CH1/1C 4SD0/1C
Pearson Edexcel International GCSE (9–1)**

Chemistry

UNIT: 4CH1

Science (Double Award) 4SD0

PAPER: 1C

Diagram Booklet

In the boxes below, write your name, centre number and candidate number.

Surname					
Other names					
Centre Number					
Candidate Number					

INSTRUCTIONS

There may be spare copies of some diagrams in case you need them.

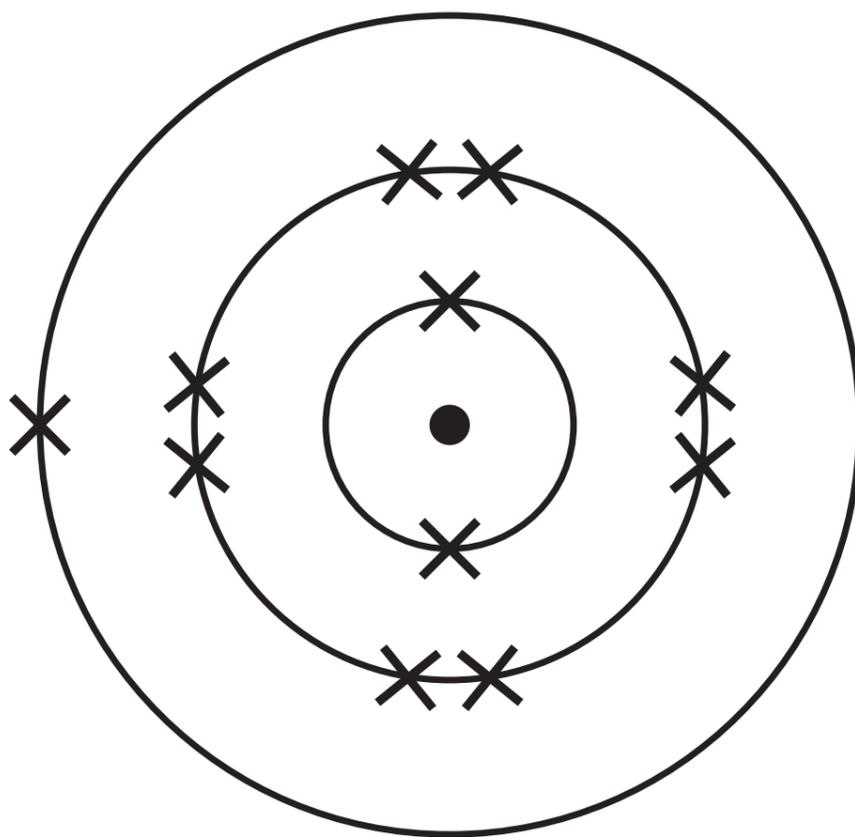
THIS DIAGRAM BOOKLET MUST BE RETURNED WITH THE QUESTION PAPER AT THE END OF THE EXAMINATION.

Contents

Page

4	Question 1
5	Question 2(a)
6	Question 2(a) (Spare copy)
7	Question 3(a)
8	Question 4(a)
9	Question 4(b)
10	Question 4(b) (Spare copy)
11	Question 4(c)
12	Question 5(a)(iv)
13	Question 5(a)(iv) (Spare copy)
14	Question 6
15	Question 6(b) and 6(c)
16	Question 6(b) and 6(c) (Spare copy)
17	Question 7(c)
18	Question 8(a)
19	Question 8(b)
20	Question 10(b)
21	Question 10(b) (Spare copy)
22	Question 10(c)

Question 1



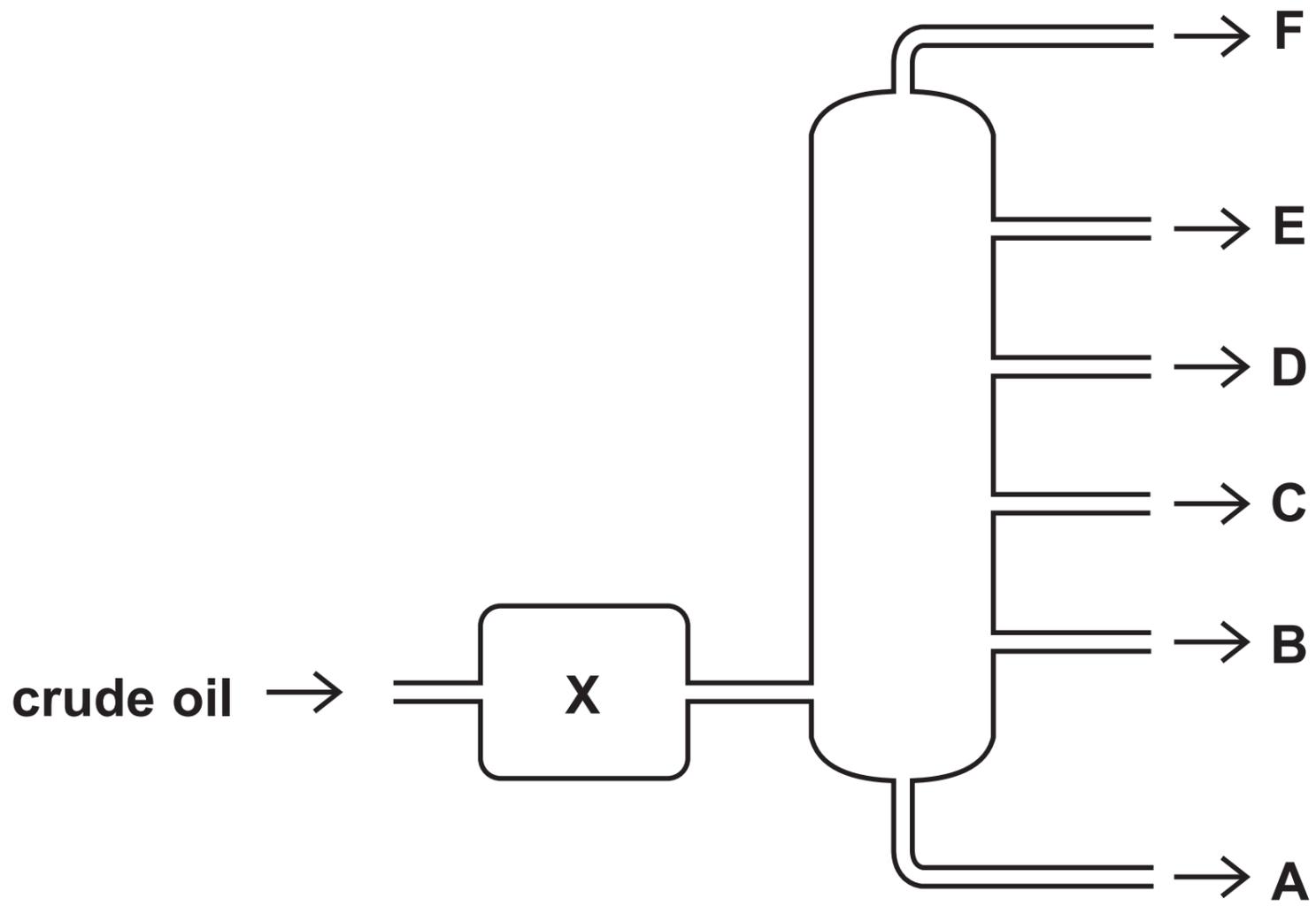
Question 2(a)

Physical change	Change of state
water to ice	
steam to water	
solid wax to liquid wax	
iodine crystals to iodine vapour	

Question 2(a)

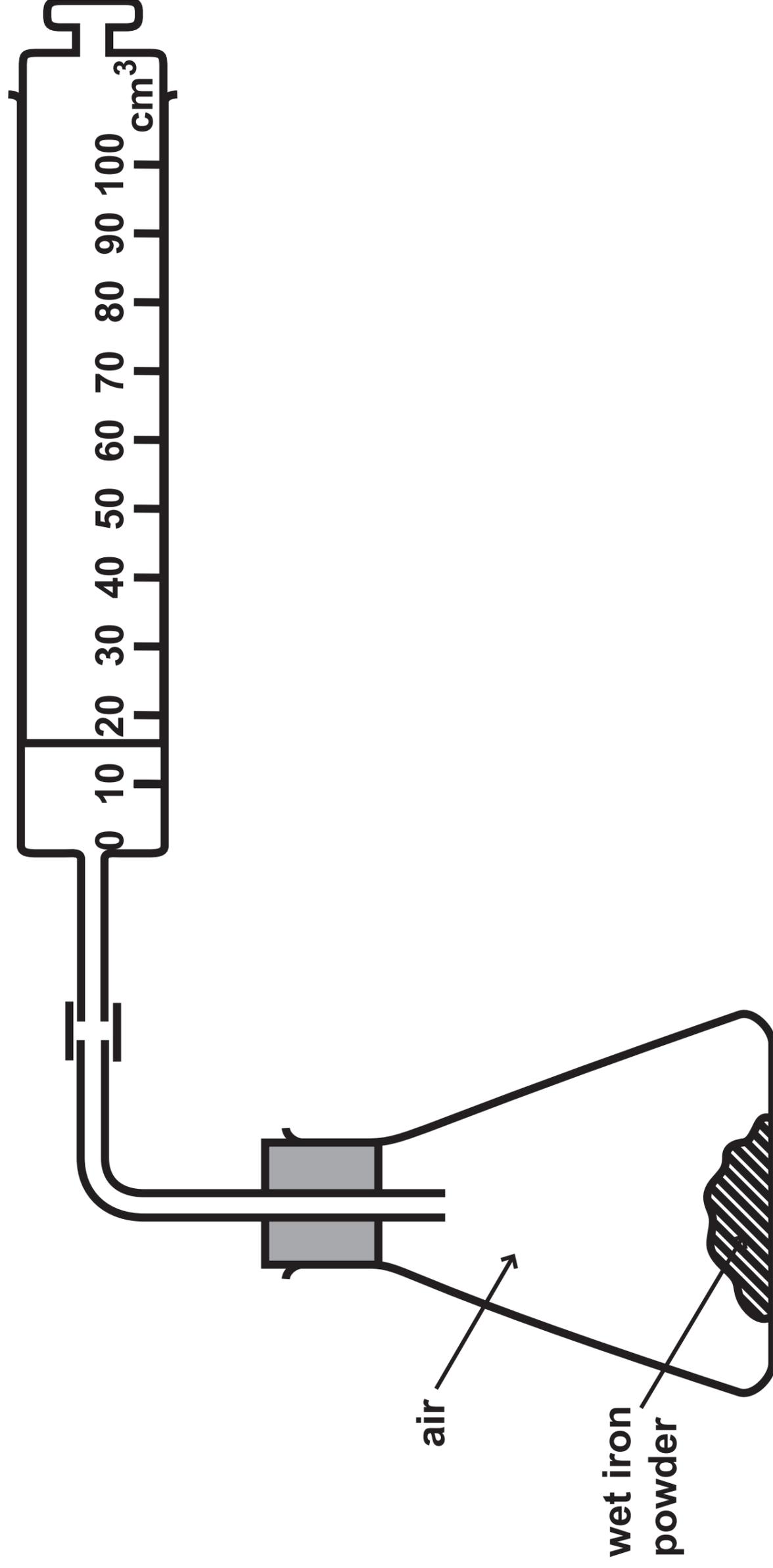
Physical change	Change of state
water to ice	
steam to water	
solid wax to liquid wax	
iodine crystals to iodine vapour	

Question 3(a)



Question 4(a)

8



Question 4(b)

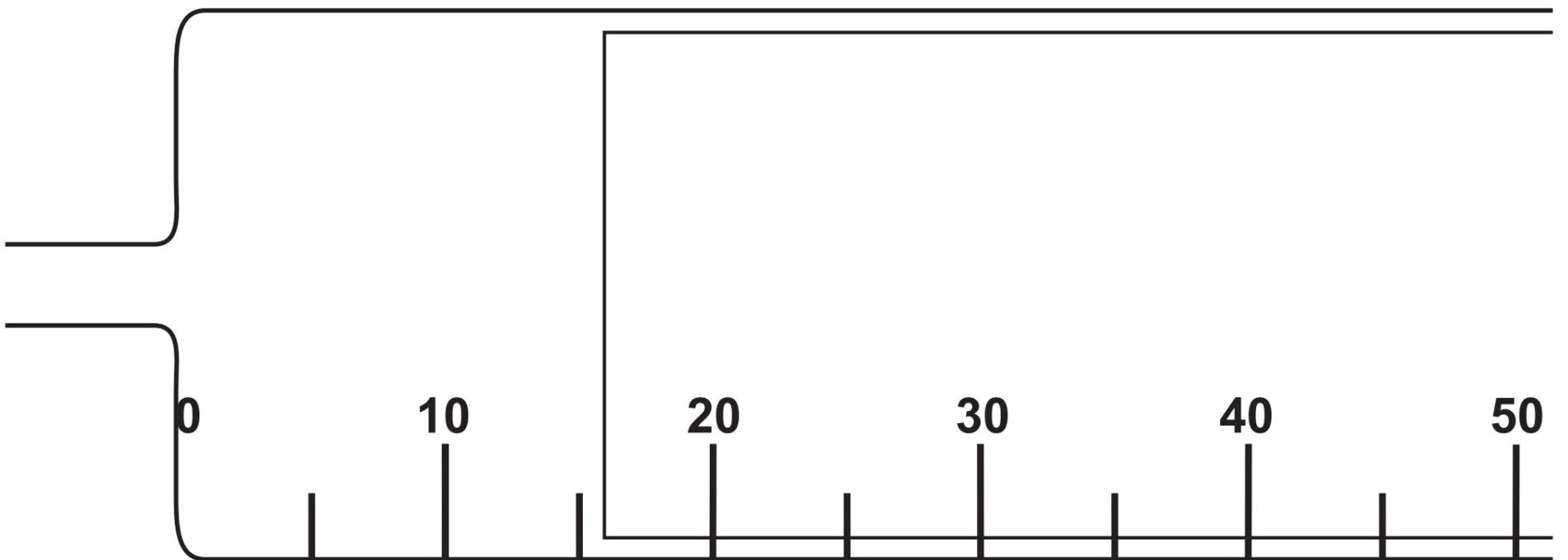


TABLE 1

syringe reading at start	
syringe reading at end	
change in volume in cm³	65

Question 4(b)

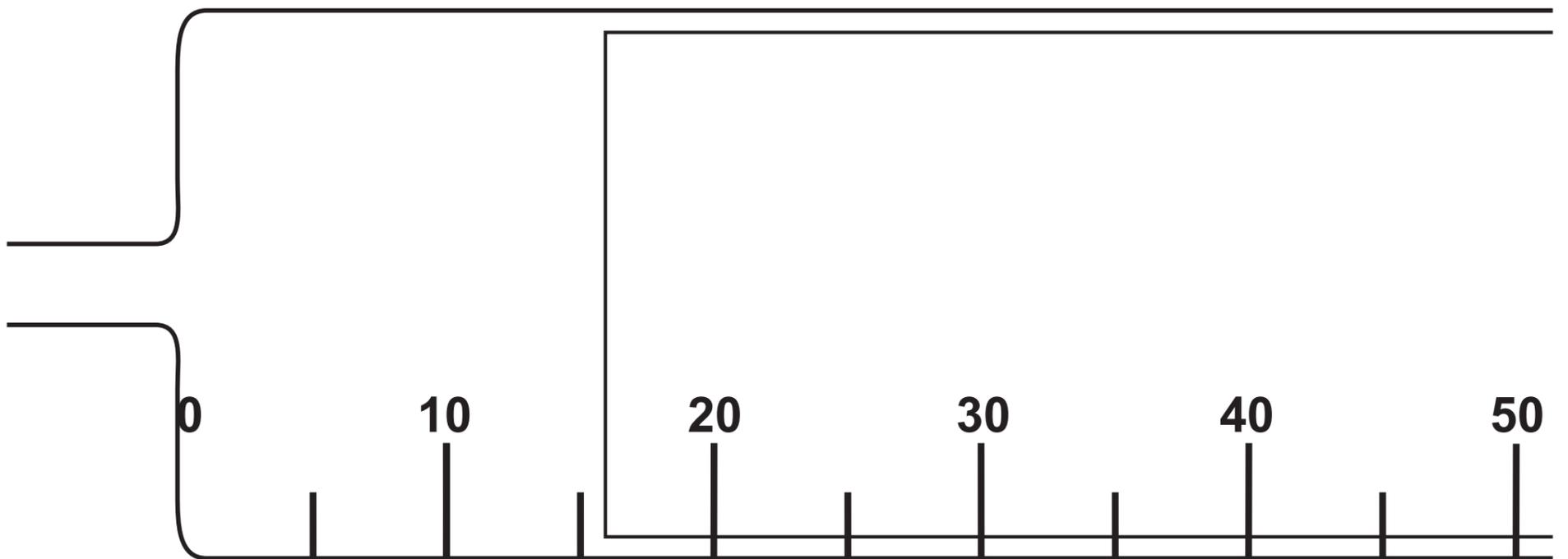


TABLE 1

syringe reading at start	
syringe reading at end	
change in volume in cm³	65

Question 4(c)

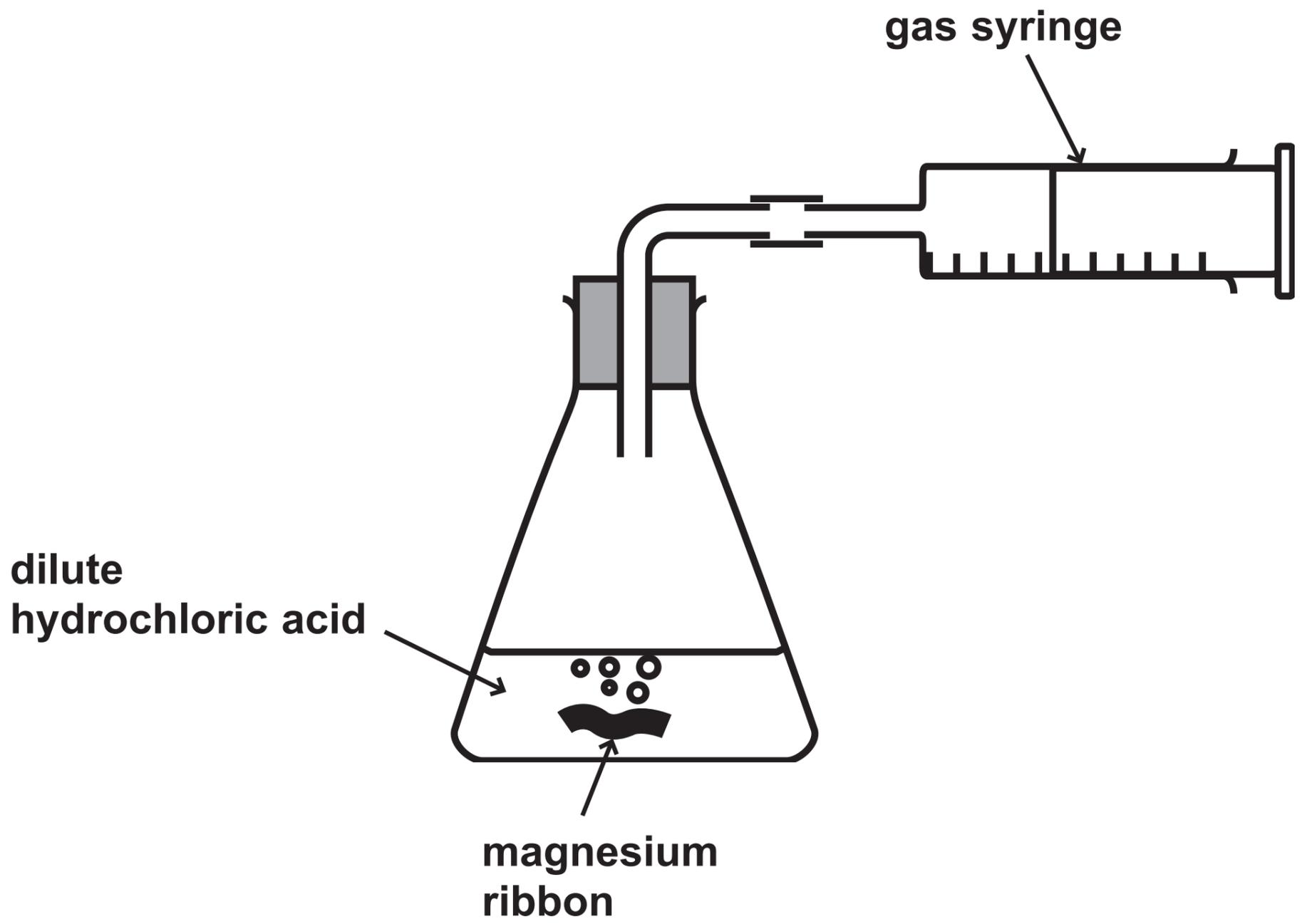
TABLE 2

volume of air in conical flask and glass tube in cm³	260
syringe reading at start	90
syringe reading at end	22

Question 5(a)(iv)**Isomer 1****Isomer 2**

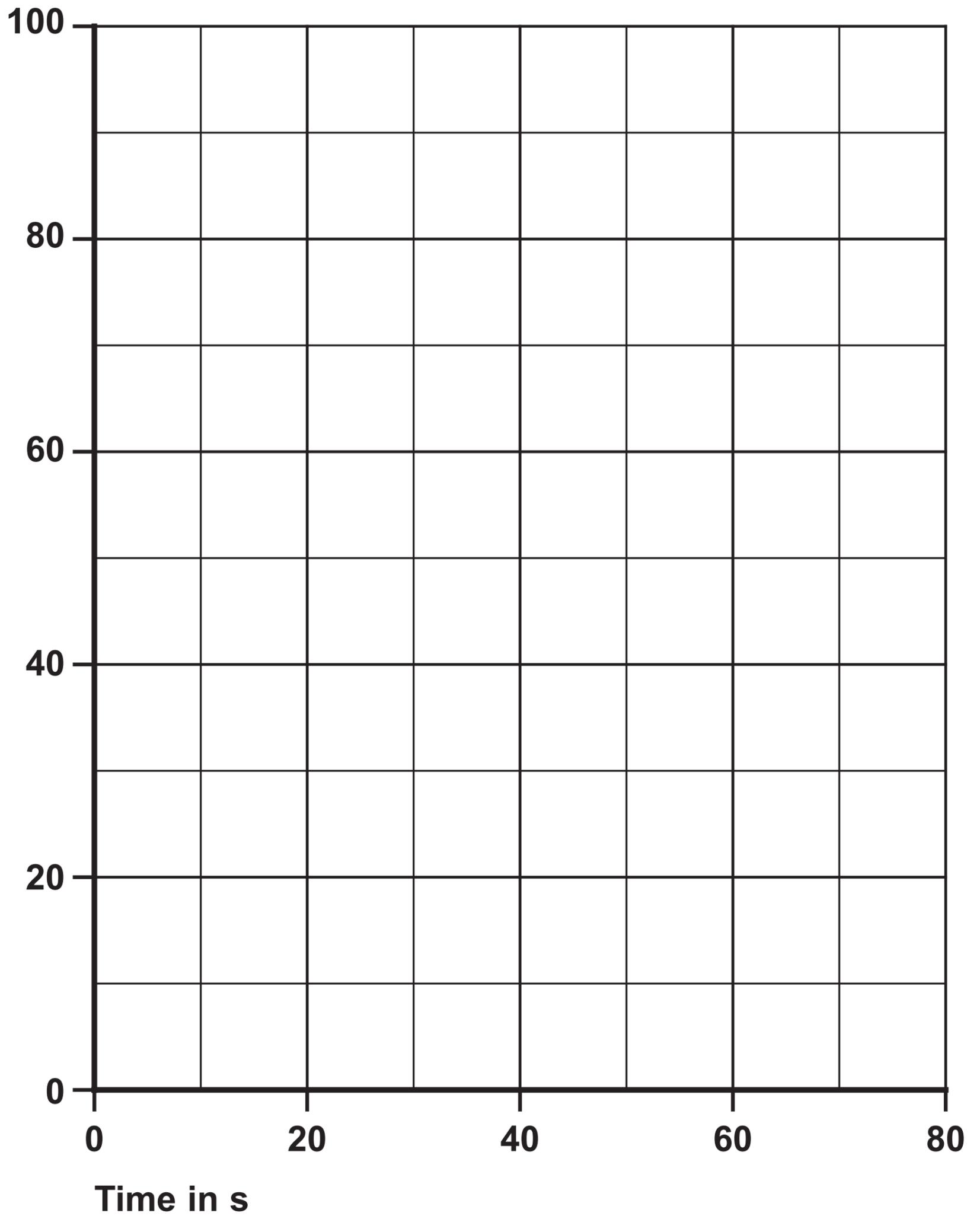
Question 5(a)(iv)**Isomer 1****Isomer 2**

Question 6



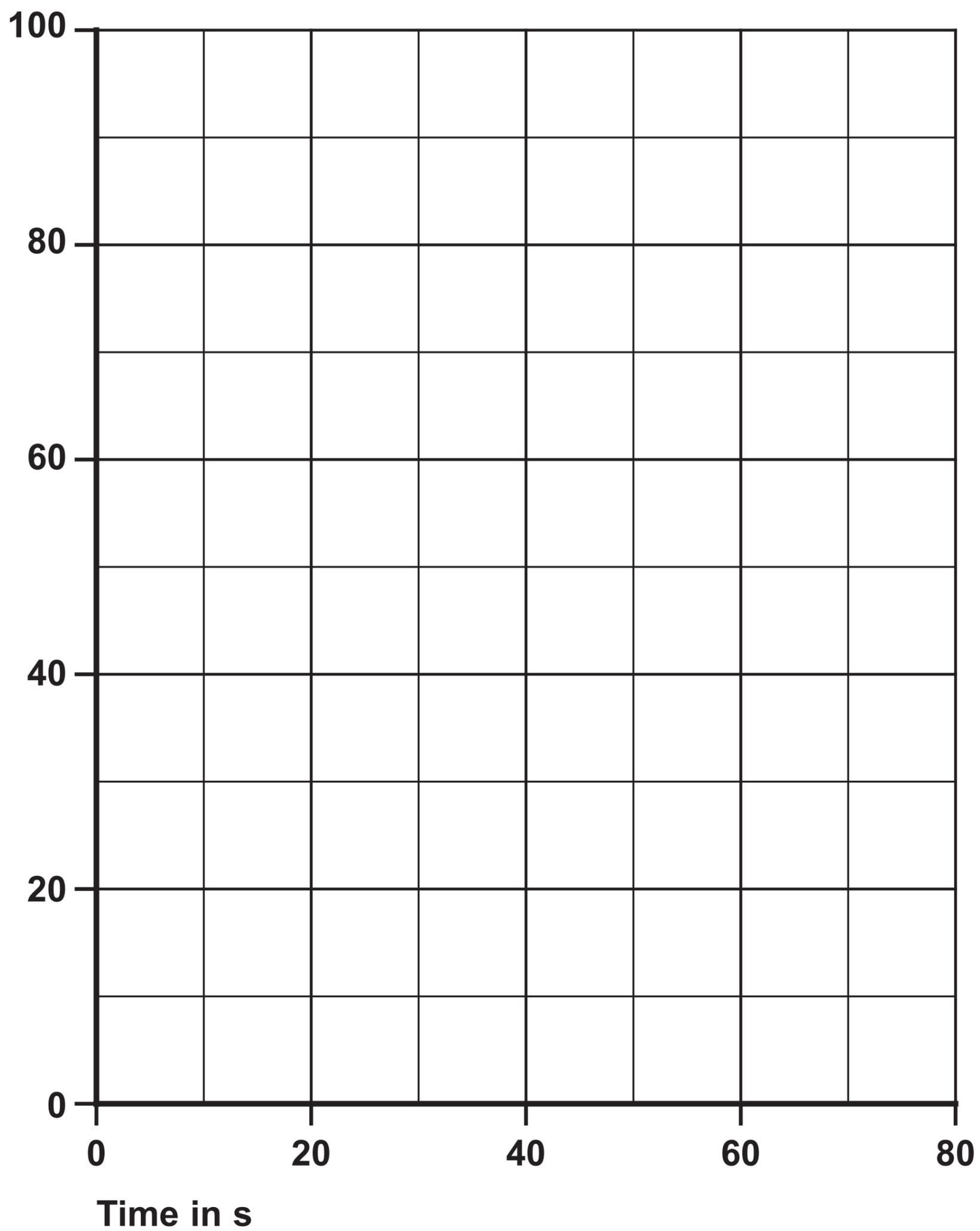
Question 6(b) and 6(c)

Volume of
hydrogen in cm^3



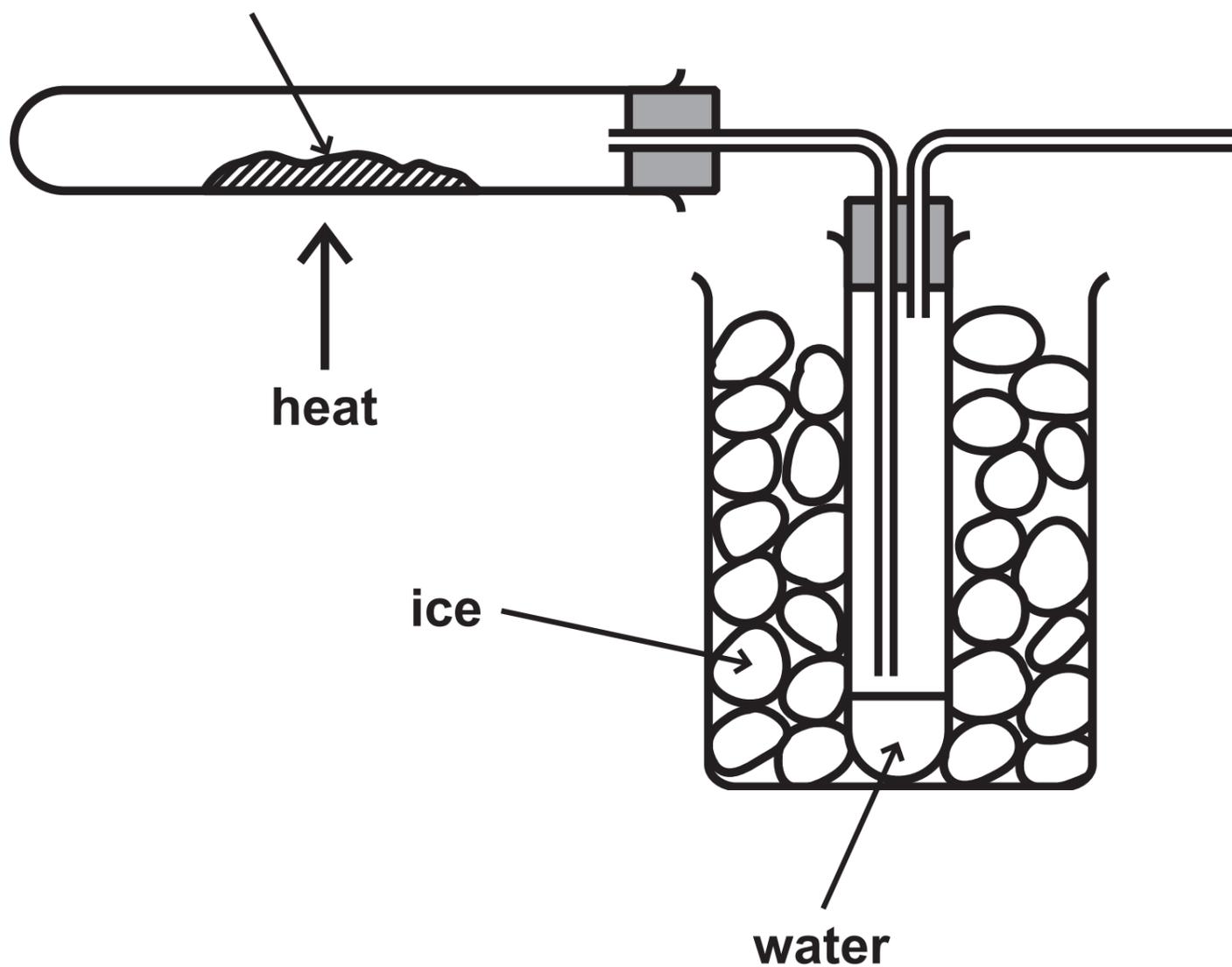
Question 6(b) and 6(c)

Volume of
hydrogen in cm^3



Question 7(c)

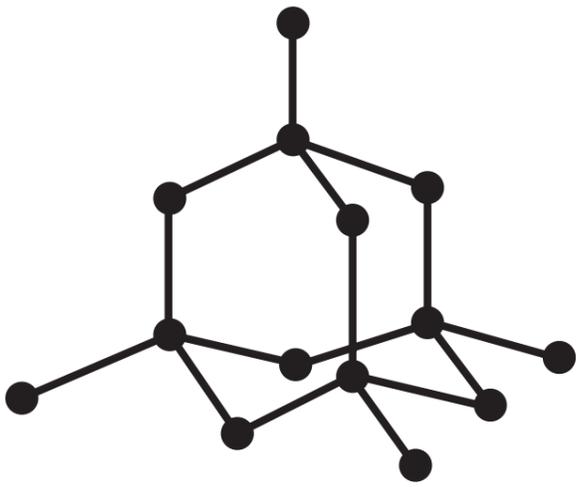
hydrated copper(II) sulfate



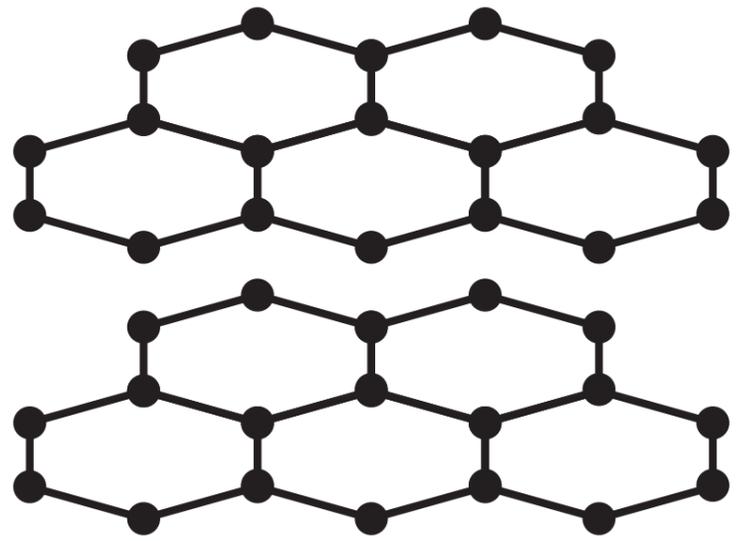
mass of empty tube in g	20.52
mass of tube and $\text{CuSO}_4 \cdot x\text{H}_2\text{O}$ in g	31.77
mass of tube and CuSO_4 in g	28.20

Question 8(a)

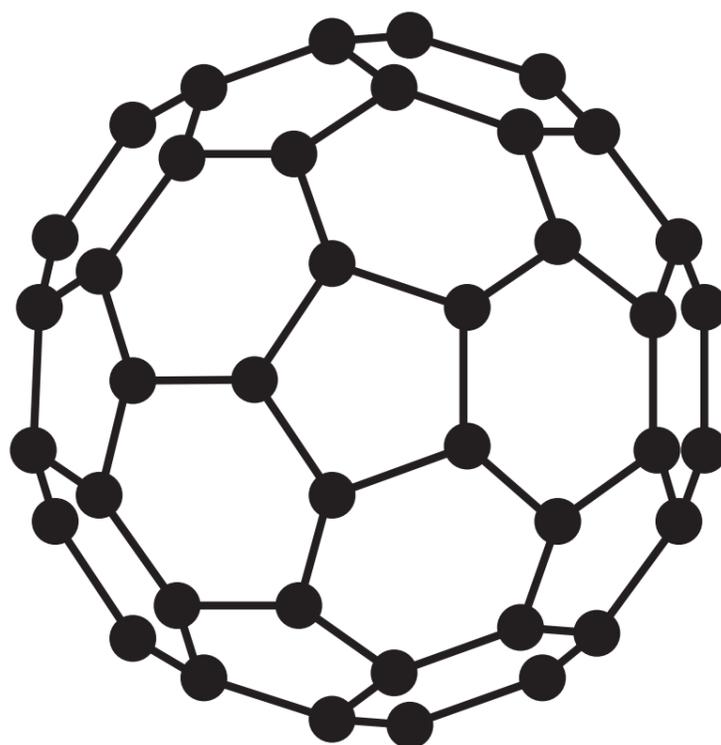
Diamond



Graphite



Question 8(b)



Substance	Approximate melting point in °C
diamond	4000
graphite	3600
C ₆₀ fullerene	600

Question 10(b)

Name	ammonium sulfate		ammonium carbonate
Formula	$(\text{NH}_4)_2\text{SO}_4$	NH_4Cl	

Question 10(b)

Name	ammonium sulfate		ammonium carbonate
Formula	(NH₄)₂SO₄	NH₄Cl	

Question 10(c)

Name	Formula	Percentage of nitrogen (%)	Approximate pH in solution
ammonia	$\text{NH}_3(\text{g})$	82	11
ammonium nitrate	$\text{NH}_4\text{NO}_3(\text{s})$		5-5
ammonium sulfate	$(\text{NH}_4)_2\text{SO}_4(\text{s})$	21	5-5