

ACTIVITY 9b – AO3 in Exams – Student Answers

Paper 1C, Q12(a)

Student 1

It is endothermic as the reaction takes in more energy than it gives out so it cools.

Student 2

An exothermic reaction is occurring because the ~~set~~ solution is giving out heat. This ~~st~~ is shown by the decrease in temperature as it shows heat has been lost.

Student 3

This is an endothermic reaction because heat is lost once the ammonium nitrate is added.

Paper 2C, Q3(c)(i)

Student 1

(c) The table shows the results of experiments done by four students, A, B, C and D.

Alcohol	Formula of alcohol	Time taken for liquid to evaporate in s				
		Student A	Student B	Student C	Student D	Mean time in s
methanol	CH ₃ OH	20	24	22	26	23
ethanol	C ₂ H ₅ OH	32	34	35	30	33
propanol	C ₃ H ₇ OH	45	47	50	48	48
butanol	C ₄ H ₉ OH	64	63	90	60	

(i) Calculate the mean (average) time for butanol to evaporate.

$$\frac{64 + 63 + 90 + 60}{4} = 69.25$$

mean time = 69.25 s

Handwritten notes: 63+64+60 = 62.3, 3 (2), Without anomaly

Student 2

(c) The table shows the results of experiments done by four students, A, B, C and D.

Alcohol	Formula of alcohol	Time taken for liquid to evaporate in s				
		Student A	Student B	Student C	Student D	Mean time in s
methanol	CH ₃ OH	20	24	22	26	23
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propanol	C ₃ H ₇ OH	45	47	50	48	48
butanol	C ₄ H ₉ OH	64	63	90	60	

(i) Calculate the mean (average) time for butanol to evaporate.

(2)

mean time = 62 s

Student 3

(c) The table shows the results of experiments done by four students, A, B, C and D.

Alcohol	Formula of alcohol	Time taken for liquid to evaporate in s				
		Student A	Student B	Student C	Student D	Mean time in s
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butanol	C ₄ H ₉ OH	64	63	90	60	

(i) Calculate the mean (average) time for butanol to evaporate.

(2)

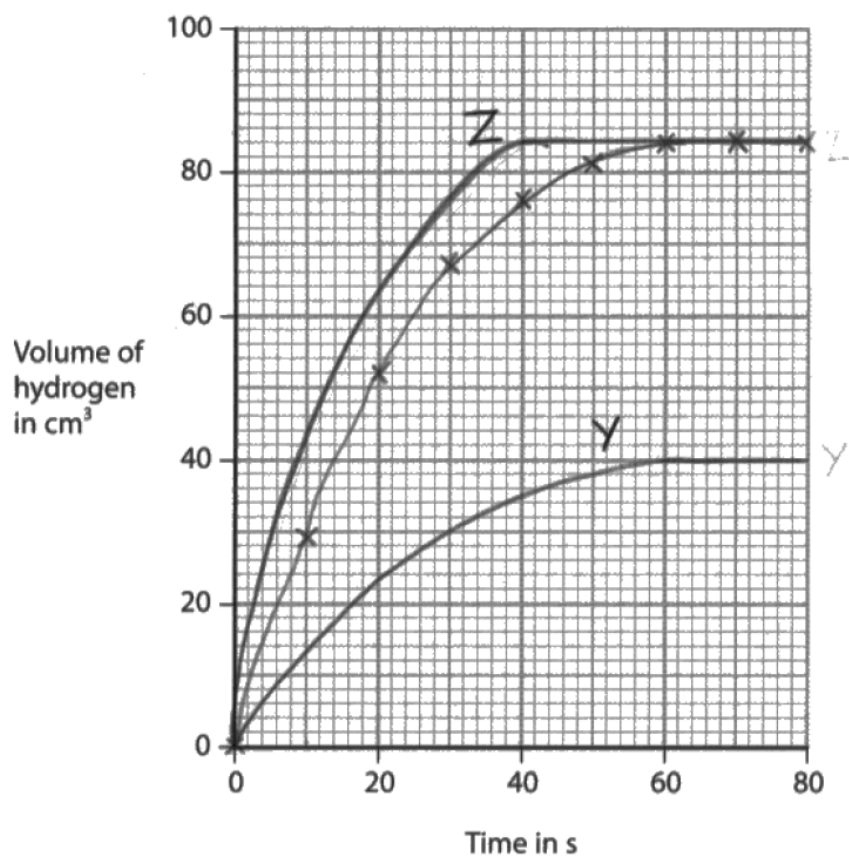
$$\frac{64 + 63 + 90 + 60}{4} = 69.25$$

mean time = 62.3 s

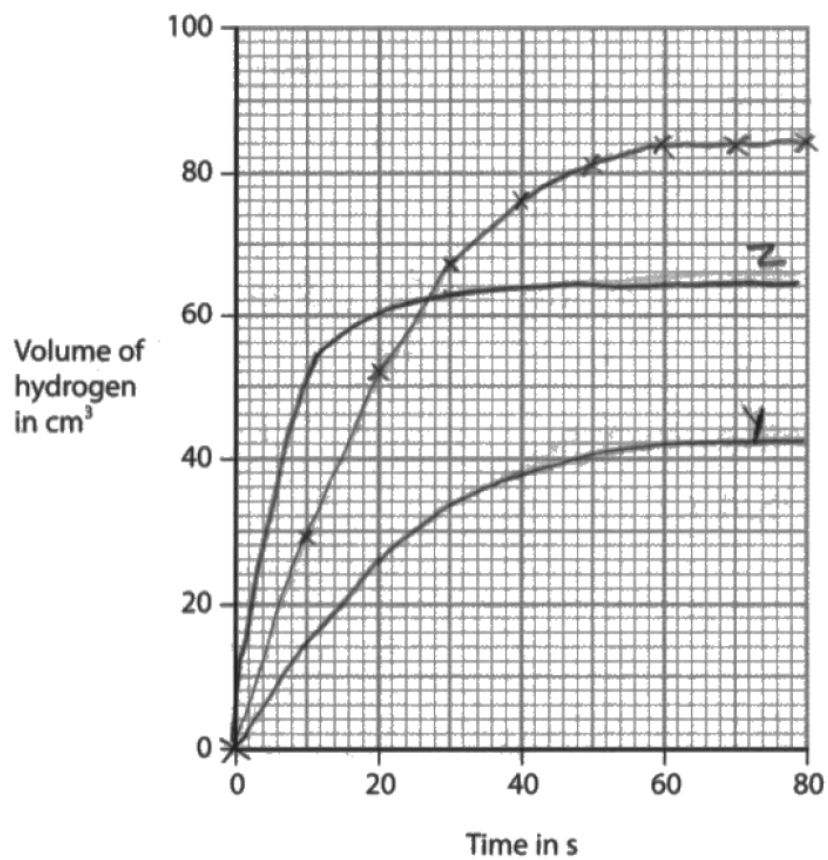
Handwritten notes: 64 + 63 + 60 = 62.3, 3, Remove the anomaly

Paper 1C, Q13(a) & (b)

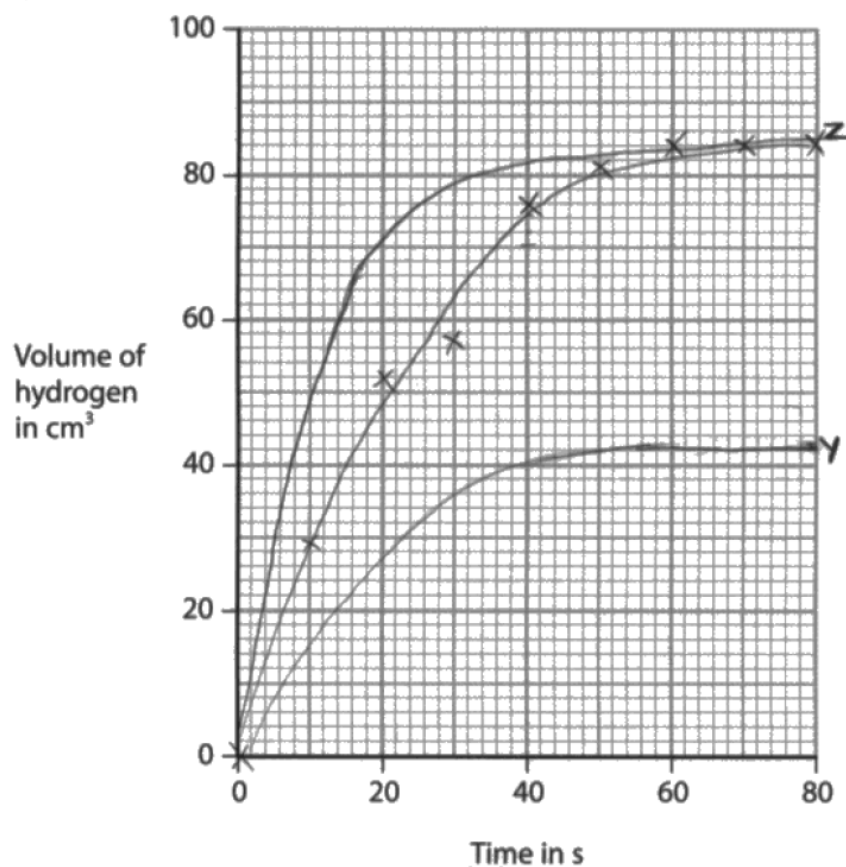
Student 1



Student 2



Student 3



Student 4

