ACTIVITY 5b – 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 occuring because the ~~sol~~ 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_3OH	20	24	22	26	23
ethanol	C_2H_5OH	32	34	35	30	33
propanol	C_3H_7OH	45	47	50	48	48
butanol	C_4H_9OH	64	63	90	60	

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

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

$\frac{63+64+60}{3} = 62.3$ (2)

Without anomaly

mean time = 69.25 s

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_3OH	20	24	22	26	23
ethanol	C_2H_5OH	32	34	35	30	33
propanol	C_3H_7OH	45	47	50	48	48
butanol	C_4H_9OH	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
methanol	CH_3OH	20	24	22	26	23
ethanol	C_2H_5OH	32	34	35	30	33
propanol	C_3H_7OH	45	47	50	48	48
butanol	C_4H_9OH	64	63	90	60	

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

(2)

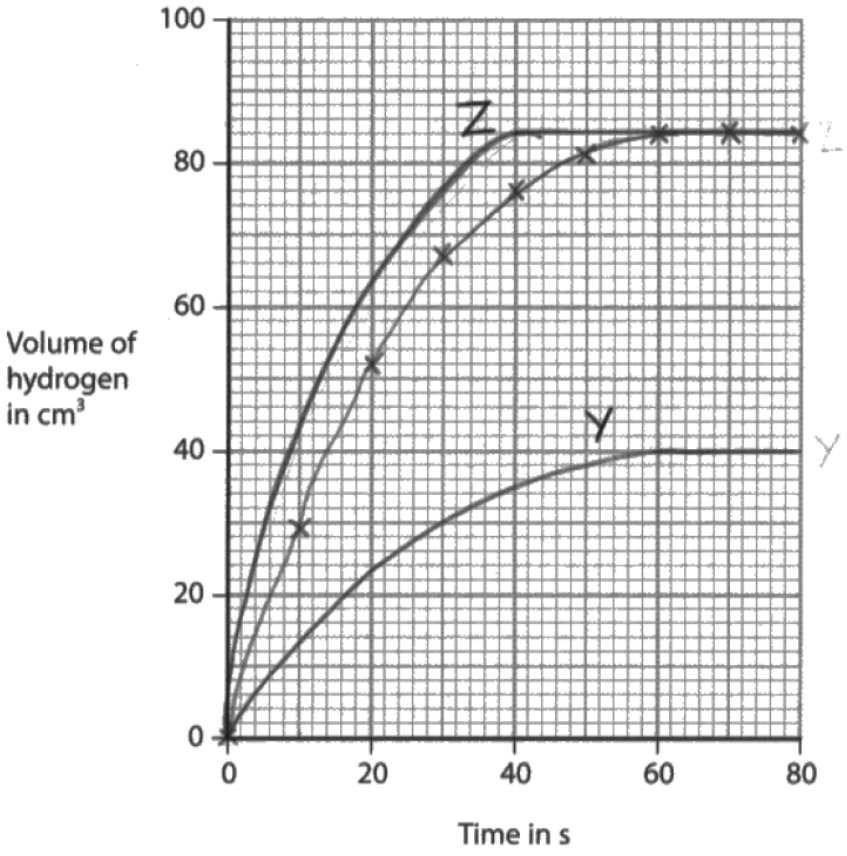
$\frac{64+63+90+60}{4} = 69.25$

$\frac{64+63+60}{3} = 62.3$. Remove the anomaly.

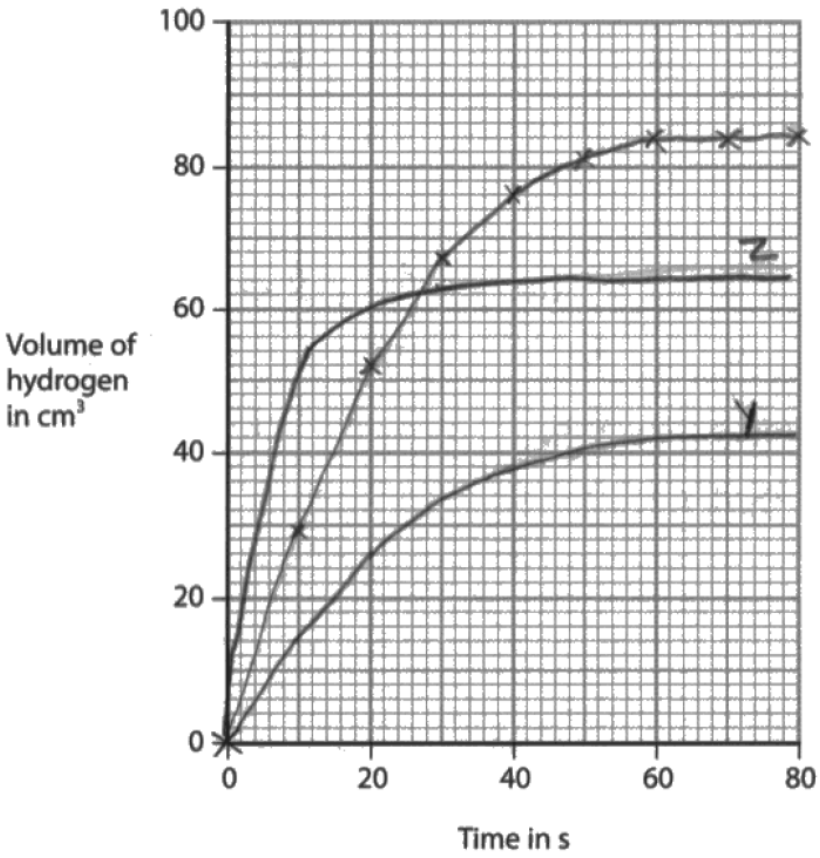
mean time = 62.3 / 69.25 s

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

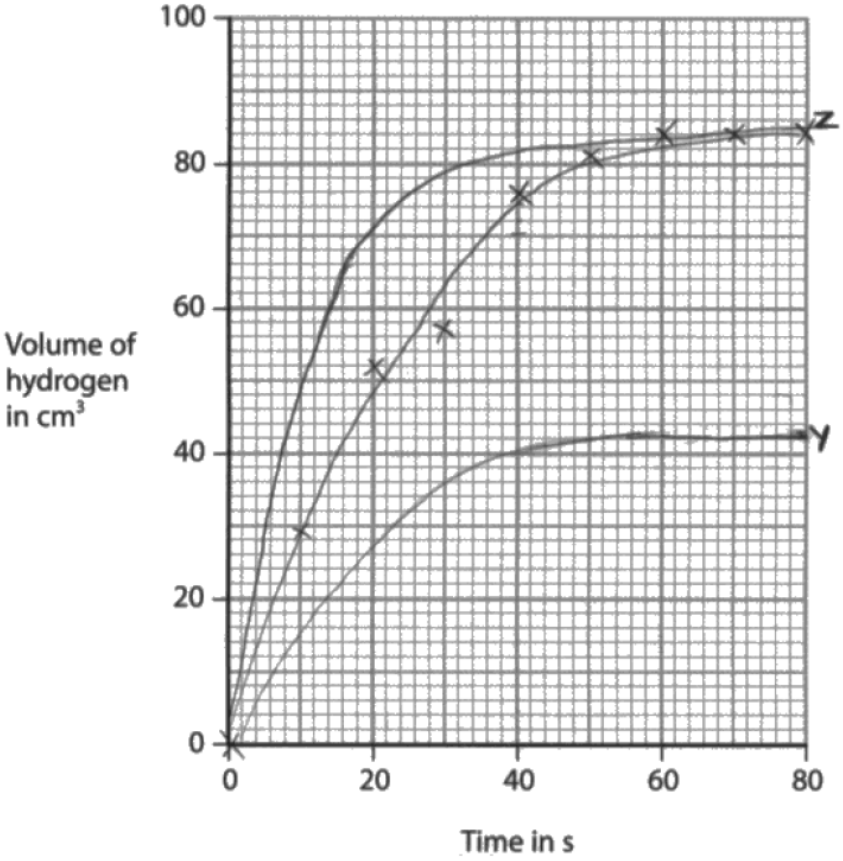
Student 1



Student 2



Student 3



Student 4