

4(a)(i)	<p>concentration (of sulfuric acid particles) decreases</p> <p><b>OR</b></p> <p>frequency of collisions between particles decreases</p>	<b>1</b>
4(a)(ii)	all the ( <b>sulfuric</b> ) <b>acid</b> has reacted	<b>1</b>

Question	Answer	Marks
4(b)	<b>M1</b> greater surface area (of zinc) <b>M2</b> frequency of collisions between (zinc and acid) particles increases	2
4(c)	<b>M1</b> $\text{mol H}_2\text{SO}_4 = 2.00 \times 25.0/1000 = 0.05(00)$ <b>M2</b> $\text{mol H}_2 = \text{M1} = 0.05(00)$ <b>M3</b> $\text{vol H}_2 = \text{M2} \times 24 = 1.2(0)$	3
4(d)(i)	$\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$ <b>M1</b> $\text{ZnCl}_2$ <b>M2</b> equation correct	2
4(d)(ii)	lighted splint <b>and</b> (squeaky) pop	1

Question	Answer	Marks
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