

Multiple Choice Response Sheet

Name: _____

1. B ✓

2. C ✓

3. C ✓

4. C ✓

5. D ✓

6. A ~~D~~

7. A ✓

8. D ✓

9. D ✓

10. D ✓

11. B

12. C

13. D

14. C

15. D

16. A

17. D

18. D

19. A

20. A

21. B

22. D

23. A

24. D

25. A

26. D

27. A

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

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Kinetics

1. $\text{Rate} = \frac{\Delta \text{amount}}{\Delta \text{time}}$ * mass lost is due to $\text{H}_2(\text{g})$

$$= \frac{(270.230 - 270.200) \text{g}}{1.0 \text{ min}} = 0.060 \text{ g/min H}_2$$

$$\frac{0.060 \text{ g H}_2}{\text{min}} \times \frac{1 \text{ mol H}_2}{2.0 \text{ g H}_2} \times \frac{2 \text{ mol Al}}{3 \text{ mol H}_2} = 0.020 \text{ mol/min Al}$$

2. Method 1: crush Zn

Explanation: \uparrow the # of collisions by making more Zn particles available for collisions. \uparrow # of collisions = \uparrow chance of successful collisions.

Method 2: \uparrow pressure: \uparrow # of collisions by giving the particles less space to move around in = \uparrow chance of successful collisions

OR \uparrow temp: increases the K.E. of the particles which will \uparrow the # colliding with sufficient energy.

OR \uparrow mass of Zn: \uparrow # of Zn particles will \uparrow # of collisions \therefore \uparrow chance of successful collisions.

