Review Packet Answer Key

Redox (Topic 9 in your review book)

1. 1
2. 1
3. 1
4. 4
5. 4
6. 4
7. 2
8. 4
9. 2
10. 4
11. 4
12. 4
13. 4
14. 4
15. 1
16. 4
17. 2
18. 1
19. 3
20. 4
21. 3
22. 3
23. 1
24. 3
25. 3
26. 4
27. 2
28. 4
29. 3
30. 2
31. 4
32. 4

33. **Mg is more reactive** and correctly oxidizes, while **H^+ is less reactive** and correctly reduces.

34. **1** Mg (s) + **2** HCl(aq) → **1** H_2 (g) + **1** $MgCl_2$ (aq)

35. Mg → Mg^{2+} + 2 e^-

36. The cell is connected to a **battery**

37. From **-2 to 0**.

38. **3** Cu^{2+} (aq) + **2** Al (s) → **3** Cu (s) + **2** Al^{3+} (aq)

39. The Al(s) is oxidized, and therefore **loses electrons** to form Al^{3+} (aq) in solution.

40. The salt bridge permits the **migration of ions** between the cells (and helps to close the circuit!)

41. **Oxidation numbers are changing** from the reactant to product side (Cu^{2+}→Cu; Fe→Fe^{2+})

42. Electrons

43. Fe^{2+} + 2 e^- → Fe

44. Zn is the most reactive, followed by Fe, then Cu being the least reactive.