



Chemistry 12 - Making Sense of the Data Booklet

NAME _____

DATE _____ BLOCK _____

For the next nine weeks or so, you will use the Data Booklet nearly every day. It is a GOOD idea to become familiar with its useage. Answer the following questions by researching throughout the booklet. Each question requires TWO answers - a page number where the answer is to be found AND the actual answer to the question.

1. What is the atomic number of curium? _____
2. In which chart will you find the overpotential effect? _____
3. Which anion is not stable in aqueous solutions? _____
4. How many elements begin with the letter "c"? _____
5. What anion is soluble with all cations? _____
6. What temperature is assumed when calculating solubility product constants? _____
7. As the pH changes from 4.0 to 7.0, what colours will you see in a solution of bromthymol blue? _____
8. Which is a stronger acid - phosphoric or hydrofluoric acid? _____
9. What acid has a K_a value of 4.3×10^{-7} ? _____
10. Which indicator has two pH color change ranges? _____
11. Arrange the following in order from strongest to weakest reducing agent. H_2S - Al - N_2O_4 - Co _____
12. How many elements do not occur naturally? _____
13. Give the chemical formulas for the following:
lithium chromate _____
calcium sulfate _____
magnesium thiocyanate _____
iron (III) fluoride _____
copper (II) acetate _____
lead (IV) sulphide _____
ammonium phosphate _____

14. What is the E° for the reaction which converts Ag^+ to Ag ? _____
15. What two conditions are assumed on the Reduction Potential table? _____
16. What is the corresponding acid to the base molecule - NH_3 ? _____
17. Which two indicators are capable of changing to "no color"? _____
18. Name and give the formula for the strongest acid. _____
19. Does magnesium hydroxide dissolve very well in water? _____
20. Name the ions which are readily oxidized by air. _____
21. The masses of elements on the periodic table are based on what standard? _____
22. Name the following:
 KMnO_4 _____
 $\text{Sn}(\text{CO}_3)_2$ _____
 $\text{Ba}(\text{OH})_2$ _____
 $\text{Fe}_2(\text{SO}_4)_3$ _____
23. With how many anions is the hydrogen ion (H^+) soluble? _____
24. What chemical has the lowest K_{sp} value? What is its K_{sp} ? _____
25. What ion is always released when an acid is converted into a base? _____
26. Name an element which was named after a U.S. state. _____
27. What is the difference between sulfate and bisulfate? _____
28. In order to be "soluble", a chemical must be present in at least () mol / L. _____
29. What is the pH mid-point for the color change in indigo carmine? What color do you think would show at this mid-point? _____
30. What do oxidizing agents all gain that reducing agents all lose? _____