Chemistry IH/I Final Exam Review – Mrs. Bauck
Optional 200-point assignment and help card due _____

The exam will consist of two parts. The district EOC has 44 multiple choice questions (50% of total score), and Bauck's exam has 66 multiple choice questions (50% of total score). This review will help you with both portions.

The final exam total score is weighted 25% of the overall semester grade. Study for it. Reread the book and notes, redo practice problems, watch tutorial videos—whatever helps you, do it.

This exam review was written directly from Bauck's exam. The exam review will count as an optional assignment grade if it is completed correctly and shown to the teacher on or before the due date.

"Help card" for Bauck's exam (NOT allowed on the EOC portion): You may use ONE 3"x5" or 4"x6" index card with information written or typed on both sides. The actual card must be submitted for approval the day the exam review is due. It will be checked for size and content. No electronic copies of cards will be accepted. No sharing of cards during the exam is permitted. You may write any information you want on the card EXCEPT THE POLYATOMIC IONS AND SIX COMMON ACIDS. You will have a laminated periodic table, but I will not furnish any equations or constants for you, so doing a help card is important.

You will need #2 pencils and erasers, a calculator, as well as something to do if you finish early. No phones are allowed as long as exams are being taken in the room.

TOPICS ON BAUCK'S PART OF THE EXAM:

Ch. 8:	Chemical Reactions	10 questions
Ch. 9:	The Mole	10 questions
Ch. 10:	Stoichiometry	10 questions
Ch. 11:	States of Matter	5 questions
Ch. 12:	Gases	10 questions
Ch. 13:	Mixtures and Solutions	6 questions
Ch. 17:	Acids & Bases	6 questions
Ch. 17:	Neutralization	9 questions
		TOTAL: 66 questions

Suggestions for the help card: (you may cut this section out and glue to a card)

STANDARD TEMPERATURE: 0° C or 273.15 K
STANDARD PRESSURE: *1 atm, 760 mm Hg, 760 torr* , 101.3 kPa, 14.7 psi (italics are exact)
K = °C + 273.15
% yield = (ACTUAL / THEORETICAL) x 100
$P_{TOTAL} = P_1 + P_2 + P_3 \ldots$
R = 0.08206 L atm/mol K
M = mol / L
PV = nRT
pH + pOH = 14.00

$$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$$

CHAPTER 9: MOLES

1. amu, GFM, GMM
2. density
3. molar mass
4. molar volume of a gas
5. STP
6. types of representative particles (4)
7. **MATH PROBLEMS (non-stoich)**
   Give examples:
   - **a. g → mol mol → g**
   - **b. mol → r.p. r.p. → mol**
   - **c. g → r.p. r.p. → g**
   - **d. mol → L L → mol**
   - **e. empirical formula**
   - **f. molecular formula**
   - **g. percent composition**

CHAPTER 10: STOICHIOMETRY

8. Interpreting equations - describe
9. Mole ratios
10. **MATH PROBLEMS**
    Give examples:
    - **a. mol A → mol B**
    - **b. g A → r.p. B r.p. A → g B**
    - **c. g A → g B**
    - **d. L A → L B**
    - **e. g A → L B L A → g B**
    - **f. Percent yield**

CHAPTER 11: STATES OF MATTER

11. absolute zero
12. amorphous
13. atm
14. barometers
15. crystals
16. condensation
17. equilibrium
18. Kinetic Theory of Gases
19. liquid
20. gas
21. kelvin
22. phase changes
23. plasma
24. pressure
25. solid
26. sublimation
27. supercooled liquid
28. **MATH PROBLEMS**
    Give examples:
    - **a. pressure conversion**
    - **b. temp. conversion**

CHAPTER 12: GASES

29. Define: α, P, V, T, n, R
30. absolute scale
31. ideal gas
32. pressure
33. real gas
34. temperature
35. volume
36. **MATH PROBLEMS**
    Give examples:
    - **a. Charles**
    - **b. Boyle**
    - **c. Gay-Lussac**
    - **d. Combined**
    - **e. Ideal**
    - **f. Partial pressure**
    - **g. Mol → g**
    - **h. Mol → r.p.**
    - **i. g → L**

CHAPTER 13: MIXTURES and SOLUTIONS

37. colloid/colloidal suspension
38. concentrated
39. dilute
40. electrolytes
41. hydration
42. "Like Dissolves Like"
43. **MATH PROBLEMS**
    Give examples:
    - **a. molarity (solve for M)**
    - **b. molarity (solve for moles)**
    - **c. molarity (solve for grams)**
44. molality
45. saturated
46. solute
47. solution
48. solvent
49. supersaturated
50. suspension
51. unsaturated

CHAPTER 17: ACIDS and BASES

52. examples of common acids
53. examples of common bases
54. hydronium ion
55. neutral pH
56. pH
57. pH range of acids
58. pH range of bases
59. **MATH PROBLEMS**
    Give examples:
    pH, pOH, $[H^+]$, $[OH^-]$

CHAPTER 17: NEUTRALIZATION

60. balancing neutralization equations
    Give examples:
    a. balance
    b. predict products and balance
    c. write entire equation and balance
61. double displacement rxns.
62. identify a salt by its formula
63. net ionic equation for neutralization rxns.