

CHEMISTRY I, IH

Class Work 12-3

NAME _____

1. COMPLETE THE EQUATION, IF NECESSARY
2. BALANCE THE EQUATION.
3. SOLVE FOR THE UNKNOWN

| <u>GIVEN</u> | | | | | <u>UNKNOWN</u> | PERIOD _____ |
|---|-----|---------------------------------|---|---|---|--------------|
| 0.25 mol HgO | 1. | $2\text{HgO} \rightarrow$ | $2\text{Hg} +$ | 1O_2 | How many moles of Hg? | |
| 0.50 mol NaCl | 2. | $2\text{NaCl} \rightarrow$ | $2\text{Na} +$ | 1Cl_2 | How many moles of Cl ₂ ? | |
| 2.0 g H ₂ | 3. | $1\text{N}_2 +$ | $3\text{H}_2 \rightarrow$ | 2NH_3 | How many grams of NH ₃ ? | |
| 1.25 g CuO | 4. | $2\text{CuO} \rightarrow$ | $2\text{Cu} +$ | 1O_2 | How many grams of O ₂ ? | |
| 2.50 mol Li | 5. | $6\text{Li} +$ | $1\text{N}_2 \rightarrow$ | $2\text{Li}_3\text{N}$ | How many moles of Li ₃ N? | |
| 0.33 mol Ag ₂ S | 6. | $16\text{Ag} +$ | $1\text{S}_8 \rightarrow$ | $8\text{Ag}_2\text{S}$ | How many moles of Ag? | |
| 0.67 g Na ₂ O | 7. | $2\text{NaOH} \rightarrow$ | $1\text{Na}_2\text{O} +$ | $1\text{H}_2\text{O}$ | How many grams of NaOH? | |
| 0.125 g NaOH | 8. | $2\text{Na} +$ | $2\text{HOH} \rightarrow$ | $2\text{NaOH} + 1\text{H}_2$ | How many grams of HOH? | |
| 0.375 mol Na ₂ SO ₄ | 9. | $2\text{NaCl} +$ | $\text{H}_2\text{SO}_4 \rightarrow$ | $2\text{HCl} + 1\text{Na}_2\text{SO}_4$ | How many moles of NaCl? | |
| 10.0 g Al ₂ O ₃ | 10. | $2\text{Al} +$ | $1\text{Fe}_2\text{O}_3 \rightarrow$ | $1\text{Al}_2\text{O}_3 + 2\text{Fe}$ | How many moles of Al? | |
| 25.5 g Ca(OH) ₂ | 11. | $1\text{Ca(OH)}_2 +$ | $1\text{Mg(HCO}_3)_2 \rightarrow$ | $1\text{Ca(HCO}_3)_2 + 1\text{Mg(OH)}_2$ | How many moles of Mg(HCO ₃) ₂ ? | |
| 37.5 g K | 12. | $3\text{K} +$ | $1\text{AlCl}_3 \rightarrow$ | $3\text{KCl} + 1\text{Al}$ | How many moles of AlCl ₃ ? | |
| 67.5 g H ₂ SO ₄ | 13. | $3\text{H}_2\text{SO}_4 +$ | $1\text{Ca}_3(\text{PO}_4)_2 \rightarrow$ | $2\text{H}_3\text{PO}_4 + 3\text{CaSO}_4$ | How many grams of Ca ₃ (PO ₄) ₂ ? | |
| 2.25 g Cl ₂ | 14. | $1\text{Cl}_2 +$ | $1\text{MgBr}_2 \rightarrow$ | $1\text{MgCl}_2 + 1\text{Br}_2$ | How many grams of MgBr ₂ ? | |
| 5.22 mol H ₂ CrO ₄ | 15. | $1\text{H}_2\text{S} +$ | $1\text{PbCrO}_4 \rightarrow$ | $1\text{H}_2\text{CrO}_4 + 1\text{PbS}$ | How many moles of PbS? | |
| 2.55 mol Ag ₂ S | 16. | $1\text{H}_2\text{S} +$ | $2\text{Ag} \rightarrow$ | $1\text{Ag}_2\text{S} + 1\text{H}_2$ | How many moles of H ₂ ? | |
| 2.50 mol CO ₂ | 17. | $2\text{C}_8\text{H}_{18} +$ | $25\text{O}_2 \rightarrow$ | $16\text{CO}_2 + 18\text{H}_2\text{O}$ | How many grams of H ₂ O? | |
| 0.125 mol H ₂ O | 18. | $1\text{C}_{25}\text{H}_{52} +$ | $38\text{O}_2 \rightarrow$ | $25\text{CO}_2 + 26\text{H}_2\text{O}$ | How many grams of CO ₂ ? | |
| 67.5 g H ₂ | 19. | $1\text{Fe} +$ | $2\text{H}_2\text{O} \rightarrow$ | $1\text{Fe(OH)}_2 + 1\text{H}_2$ | How many grams of Fe? | |
| 101 g KClO ₃ | 20. | 2KClO_3 | \rightarrow | $2\text{KCl} + 3\text{O}_2$ | How many moles of KCl? | |