Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 4S – Writing Combination Reactions with Balancing (Part 2) 20 Points

*For the following reactions, write the products of each reaction following the template provided. Balance each reaction. Show work for ionic compound*

| Reaction | _____ $Ni^{3+}$ + _____ $KClO_3$ → _____ + _____ |
|---|---|
| General Form | A + BC → AC + B |

| Formula | A | C |
|---|---|---|
| Ion Charge | | |
| Cross Method | | |
| AC | | |

| Reactants | | Products | |
|---|---|---|---|
| Ni | | Ni | |
| K | | K | |
| $ClO_3$ | | $ClO_3$ | |

| Reaction | _____ Ba + _____ $Pd(SO_4)_2$ → _____ + _____ |
|---|---|
| General Form | A + BC → AC + B |

| Formula | A | C |
|---|---|---|
| Ion Charge | | |
| Cross Method | | |
| AC | | |

| Reactants | | Products | |
|---|---|---|---|
| Ba | | Ba | |
| Pd | | Pd | |
| $SO_4$ | | $SO_4$ | |

| Reaction | _____ $Cr^{1+}$ + _____ $Mo_3(PO_4)_2$ → _____ + _____ |
|---|---|
| General Form | A + BC → AC + B |

| Formula | A | C |
|---|---|---|
| Ion Charge | | |
| Cross Method | | |
| AC | | |

| Reactants | | Products | |
|---|---|---|---|
| Cr | | Cr | |
| Mo | | Mo | |
| $PO_4$ | | $PO_4$ | |

| Reaction | _____ $Sc(HCO_3)_3$ + _____ $RaF_2$ → _____ + _____<br>Sc = +3 |
|---|---|
| General Form | AB + CD → AD + CB |

| Formula | A | D | C | B | Reactants | | Products | |
|---|---|---|---|---|---|---|---|---|
| Ion Charge | | | | | Sc | | Sc | |
| Cross Method | | | | | $HCO_3$ | | $HCO_3$ | |
| AD CB | | | | | Ra | | Ra | |
| | | | | | F | | F | |

| Reaction | _____ $H_2C_2O_4$ + _____ $Bi(OH)_4$ → _____ + _____<br>Bi = +4 |
|---|---|
| General Form | AB + CD → AD + CB |

| Formula | A | D | C | B | Reactants | | Products | |
|---|---|---|---|---|---|---|---|---|
| Ion Charge | | | | | H | | H | |
| Cross Method | | | | | $C_2O_4$ | | $C_2O_4$ | |
| AD CB | | | | | Bi | | Bi | |
| | | | | | OH | | OH | |

| Reaction | _____ $Zn_3N$ + _____ $Ca(OCN)_2$ → _____ + _____<br>Zn = +1 |
|---|---|
| General Form | AB + CD → AD + CB |

| Formula | A | D | C | B | Reactants | | Products | |
|---|---|---|---|---|---|---|---|---|
| Ion Charge | | | | | Zn | | Zn | |
| Cross Method | | | | | N | | N | |
| AD CB | | | | | Ca | | Ca | |
| | | | | | OCN | | OCN | |