

**BALANCING EQUATIONS PRACTICE WORKSHEET**

- 1.) \_\_\_ CH<sub>4</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ CO<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- 2.) \_\_\_ Na + \_\_\_ I<sub>2</sub> → \_\_\_ NaI
- 3.) \_\_\_ N<sub>2</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ N<sub>2</sub>O
- 4.) \_\_\_ N<sub>2</sub> + \_\_\_ H<sub>2</sub> → \_\_\_ NH<sub>3</sub>
- 5.) \_\_\_ KI + \_\_\_ Cl<sub>2</sub> → \_\_\_ KCl + \_\_\_ I<sub>2</sub>
- 6.) \_\_\_ HCl + \_\_\_ Ca(OH)<sub>2</sub> → \_\_\_ CaCl<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- 7.) \_\_\_ KClO<sub>3</sub> → \_\_\_ KCl + \_\_\_ O<sub>2</sub>
- 8.) \_\_\_ K<sub>3</sub>PO<sub>4</sub> + \_\_\_ HCl → \_\_\_ KCl + \_\_\_ H<sub>3</sub>PO<sub>4</sub>
- 9.) \_\_\_ S + \_\_\_ O<sub>2</sub> → \_\_\_ SO<sub>3</sub>
- 10.) \_\_\_ KI + \_\_\_ Pb(NO<sub>3</sub>)<sub>2</sub> → \_\_\_ KNO<sub>3</sub> + \_\_\_ PbI<sub>2</sub>
- 11.) \_\_\_ CaSO<sub>4</sub> + \_\_\_ AlBr<sub>3</sub> → \_\_\_ CaBr<sub>2</sub> + \_\_\_ Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>
- 12.) \_\_\_ H<sub>2</sub>O<sub>2</sub> → \_\_\_ H<sub>2</sub>O + \_\_\_ O<sub>2</sub>
- 13.) \_\_\_ Na + \_\_\_ H<sub>2</sub>O → \_\_\_ NaOH + \_\_\_ H<sub>2</sub>
- 14.) \_\_\_ C<sub>2</sub>H<sub>6</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ CO<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- 15.) \_\_\_ Mg(NO<sub>3</sub>)<sub>2</sub> + \_\_\_ K<sub>3</sub>PO<sub>4</sub> → \_\_\_ Mg<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> + \_\_\_ KNO<sub>3</sub>

**REACTION TYPES WORKSHEET**

--> Balance each equation.

--> Identify the type of reaction as:

\* S - synthesis

\* D - decomposition

\* C - combustion

\* SR - single replacement

\* DR - double replacement

TYPE

- \_\_\_ 1. \_\_\_ Fe + \_\_\_ O<sub>2</sub> → \_\_\_ Fe<sub>2</sub>O<sub>3</sub>
- \_\_\_ 2. \_\_\_ Cl<sub>2</sub> + \_\_\_ KBr → \_\_\_ KCl + \_\_\_ Br<sub>2</sub>
- \_\_\_ 3. \_\_\_ Fe + \_\_\_ Cu(NO<sub>3</sub>)<sub>2</sub> → \_\_\_ Fe(NO<sub>3</sub>)<sub>3</sub> + \_\_\_ Cu
- \_\_\_ 4. \_\_\_ NaCl → \_\_\_ Na + \_\_\_ Cl<sub>2</sub>
- \_\_\_ 5. \_\_\_ FeCl<sub>3</sub> + \_\_\_ KOH → \_\_\_ KCl + \_\_\_ Fe(OH)<sub>3</sub>
- \_\_\_ 6. \_\_\_ KClO<sub>3</sub> → \_\_\_ KCl + \_\_\_ O<sub>2</sub>
- \_\_\_ 7. \_\_\_ Al + \_\_\_ O<sub>2</sub> → \_\_\_ Al<sub>2</sub>O<sub>3</sub>
- \_\_\_ 8. \_\_\_ Na<sub>2</sub>S + \_\_\_ AgNO<sub>3</sub> → \_\_\_ Ag<sub>2</sub>S + \_\_\_ NaNO<sub>3</sub>
- \_\_\_ 9. \_\_\_ CaCO<sub>3</sub> → \_\_\_ CaO + \_\_\_ CO<sub>2</sub>
- \_\_\_ 10. \_\_\_ Mg + \_\_\_ HCl → \_\_\_ MgCl<sub>2</sub> + \_\_\_ H<sub>2</sub>
- \_\_\_ 11. \_\_\_ Mg(OH)<sub>2</sub> + \_\_\_ HCl → \_\_\_ MgCl<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- \_\_\_ 12. \_\_\_ Na<sub>2</sub>SO<sub>4</sub> + \_\_\_ BaCl<sub>2</sub> → \_\_\_ BaSO<sub>4</sub> + \_\_\_ NaCl
- \_\_\_ 13. \_\_\_ C<sub>2</sub>H<sub>2</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ CO<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- \_\_\_ 14. \_\_\_ CaI<sub>2</sub> + \_\_\_ F<sub>2</sub> → \_\_\_ CaF<sub>2</sub> + \_\_\_ I<sub>2</sub>
- \_\_\_ 15. \_\_\_ NaOH → \_\_\_ Na<sub>2</sub>O + \_\_\_ H<sub>2</sub>O
- \_\_\_ 16. \_\_\_ ZnBr<sub>2</sub> + \_\_\_ AgNO<sub>3</sub> → \_\_\_ AgBr + \_\_\_ Zn(NO<sub>3</sub>)<sub>2</sub>

- \_\_\_ 17. \_\_\_ C<sub>4</sub>H<sub>10</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ CO<sub>2</sub> + \_\_\_ H<sub>2</sub>O
- \_\_\_ 18. \_\_\_ K + \_\_\_ Br<sub>2</sub> → \_\_\_ KBr
- \_\_\_ 19. \_\_\_ NaHCO<sub>3</sub> → \_\_\_ Na<sub>2</sub>CO<sub>3</sub> + \_\_\_ H<sub>2</sub>O + \_\_\_ CO<sub>2</sub>
- \_\_\_ 20. \_\_\_ AgNO<sub>3</sub> + \_\_\_ Cu → \_\_\_ Ag + \_\_\_ Cu(NO<sub>3</sub>)<sub>2</sub>
- \_\_\_ 21. \_\_\_ CuSO<sub>4</sub> + \_\_\_ NaOH → \_\_\_ Cu(OH)<sub>2</sub> + \_\_\_ Na<sub>2</sub>SO<sub>4</sub>
- \_\_\_ 22. \_\_\_ Ca(ClO<sub>3</sub>)<sub>2</sub> → \_\_\_ CaCl<sub>2</sub> + \_\_\_ O<sub>2</sub>
- \_\_\_ 23. \_\_\_ PH<sub>3</sub> + \_\_\_ O<sub>2</sub> → \_\_\_ H<sub>3</sub>PO<sub>4</sub>
- \_\_\_ 24. \_\_\_ H<sub>2</sub>O + \_\_\_ Fe → \_\_\_ H<sub>2</sub> + \_\_\_ Fe<sub>3</sub>O<sub>4</sub>
- \_\_\_ 25. \_\_\_ NO + \_\_\_ O<sub>2</sub> → \_\_\_ NO<sub>2</sub>

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**Unit 8 Review Worksheet (Honors level)**

- (A) Write the reaction using formulas (reactants and products).  
 (B) Balance the equation and tell the type of reaction.

	<u>Reactants</u>		<u>Products</u>	<u>Type of Eqn.</u>
1.	silver nitrate + sodium chloride	→	sodium nitrate + silver chloride	
2.	ammonium sulfide + barium nitrate	→	ammonium nitrate + barium sulfide	
3.	lithium carbonate	→	lithium oxide + carbon dioxide	
4.	zinc + sulfur	→	zinc sulfide	
5.	potassium + chlorine	→	potassium chloride	
6.	magnesium nitride	→	magnesium + nitrogen	
7.	aluminum + copper (II) sulfate	→		
8.	aluminum + iron (III) bromide	→		
9.	bromine + silver chloride	→		

UNIT 8 - CHEMICAL EQUATIONS

10.	zinc + nickel (II) nitrate	→		
11.	magnesium + silver sulfate	→		
12.	potassium sulfate + aluminum chlorate	→	potassium chlorate + aluminum sulfate	
13.	ethane (C <sub>2</sub> H <sub>6</sub> ) + oxygen	→	carbon dioxide + water	
14.	copper (II) chloride + sodium phosphate	→	copper (II) phosphate + sodium chloride	
15.	calcium bicarbonate	→	calcium oxide + carbon dioxide + water	
16.	strontium nitrate + copper (II) sulfate	→	strontium sulfate + copper (II) nitrate	
17.	magnesium acetate + iron (III) carbonate	→	magnesium carbonate + iron (III) acetate	
18.	copper (II) phosphate + zinc	→		
19.	potassium + HCl	→		
20.	calcium + potassium chlorate	→		