

3	4	5	6	7	8	9	10	11	12	
3B	4B	5B	6B	7B	8B			1B	2B	4A
			Cr ²⁺ Cr ³⁺	Mn ²⁺ Mn ³⁺	Fe ²⁺ Fe ³⁺	Co ²⁺ Co ³⁺	Ni ²⁺ Ni ³⁺	Cu ⁺ Cu ²⁺	Zn ²⁺	
								Ag ⁺	Cd ²⁺	Sn ²⁺ Sn ⁴⁺
								Au ⁺ Au ³⁺	Hg ₂ ²⁺ Hg ²⁺	Pb ²⁺ Pb ⁴⁺



Metals



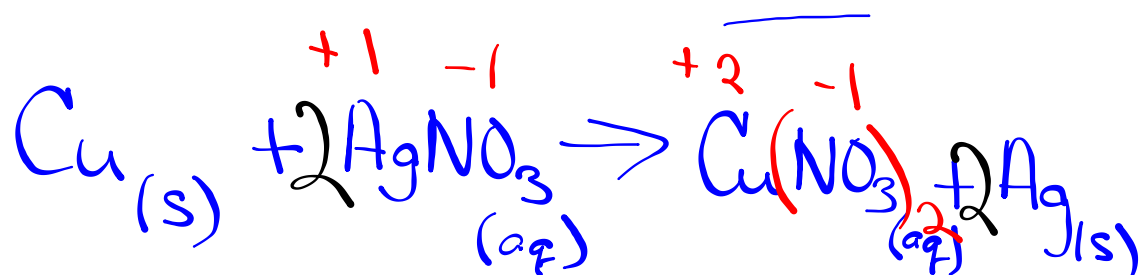
Metalloids



Nonmetals

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Copper (II) solid plus silver nitrate solution yields



Iron (II) solid plus copper (II) nitrate solution yields



Activity Series Chart

	Metals		Non-Metals	
	<i>Name</i>	<i>Symbol</i>	<i>Name</i>	<i>Symbol</i>
Most Active ↑ ↓ Least Active	<i>Lithium</i>	<i>Li</i>	<i>Fluorine</i>	<i>F</i>
	<i>Potassium</i>	<i>K</i>	<i>Chlorine</i>	<i>Cl</i>
	<i>Barium</i>	<i>Ba</i>	<i>Bromine</i>	<i>Br</i>
	<i>Strontium</i>	<i>Sr</i>	<i>Iodine</i>	<i>I</i>
	<i>Calcium</i>	<i>Ca</i>		
	<i>Sodium</i>	<i>Na</i>		
	<i>Magnesium</i>	<i>Mg</i>		
	<i>Aluminum</i>	<i>Al</i>		
	<i>Manganese</i>	<i>Mn</i>		
	<i>Zinc</i>	<i>Zn</i>		
	<i>Iron</i>	<i>Fe</i>		
	<i>Cadmium</i>	<i>Cd</i>		
	<i>Cobalt</i>	<i>Co</i>		
	<i>Nickel</i>	<i>Ni</i>		
<i>Tin</i>	<i>Sn</i>			
<i>Lead</i>	<i>Pb</i>			
<i>Hydrogen</i>	<i>H</i>			
<i>Copper</i>	<i>Cu</i>			
<i>Silver</i>	<i>Ag</i>			
<i>Mercury</i>	<i>Hg</i>			
<i>Gold</i>	<i>Au</i>			

Elements CANNOT replace anything ABOVE them. The reaction DOES NOT OCCUR in this situation.

Table 11.2

Activity Series of Metals

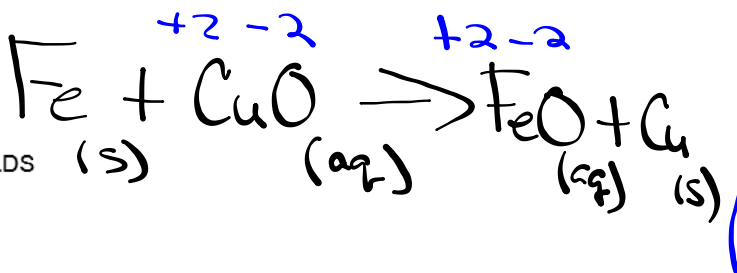
	Name	Symbol
↓ Decreasing reactivity	Lithium	Li
	Potassium	K
	Calcium	Ca
	Sodium	Na
	Magnesium	Mg
	Aluminum	Al
	Zinc	Zn
	Iron	Fe
	Lead	Pb
	(Hydrogen)	(H)*
	Copper	Cu
	Mercury	Hg
	Silver	Ag

*Metals from Li to Na will replace H from acids and water; from Mg to Pb they will replace H from acids only.

Name _____ Date _____

SINGLE REPLACEMENT RXN PRACTICE

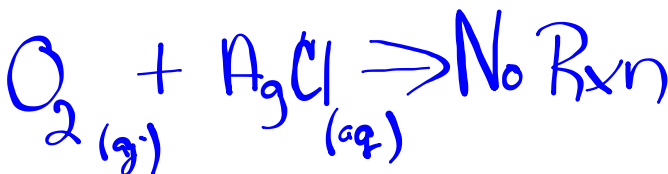
1. IRON (II) PLUS COPPER (II) OXIDE YIELDS



2. POTASSIUM PLUS SODIUM CHLORIDE YIELDS

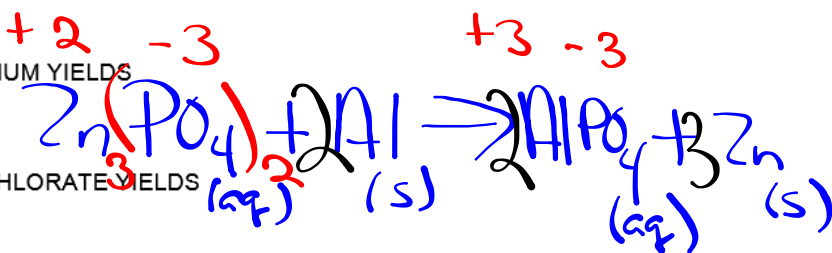
3. MAGNESIUM OXIDE PLUS ZINC YIELDS

4. OXYGEN PLUS SILVER CHLORIDE YIELDS



5. BARIUM PLUS SILVER NITRATE YIELDS

6. ZINC PHOSPHATE PLUS ALUMINUM YIELDS

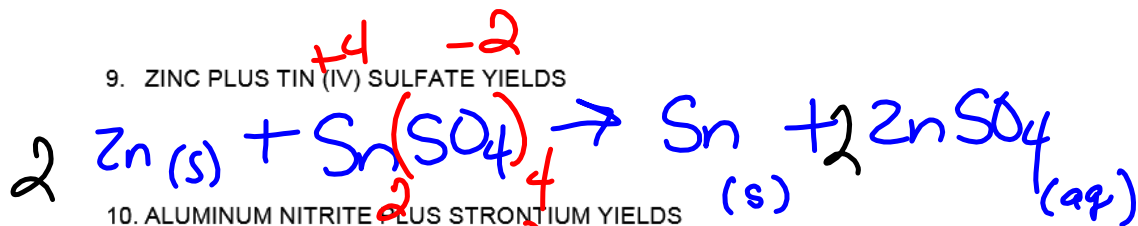


7. IRON (III) PLUS MERCURY (IV) CHLORATE YIELDS

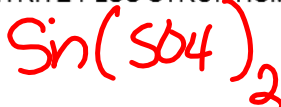
8. POTASSIUM PLUS TIN (IV) FLUORIDE YIELDS

✓

9. ZINC PLUS TIN (IV) SULFATE YIELDS



10. ALUMINUM NITRIDE PLUS STRONTIUM YIELDS



11. LEAD (II) ACETATE PLUS COPPER YIELDS

No Rxn



12. MANGANESE (III) PHOSPHITE PLUS SODIUM YIELDS

13. CALCIUM OXIDE PLUS LITHIUM YIELDS

14. LITHIUM CHLORIDE PLUS GOLD (I) YIELDS

No Rxn

15. COPPER (I) SULFITE PLUS HYDROGEN YIELDS

16. GOLD (III) CHLORIDE PLUS NICKEL (II) YIELDS