

Name: _____ Date: _____ Period: _____

Graded problems are worth 2 points each. This assignment is graded out of **26** points.

1) What are the roman numeral equivalents for the following numbers?

Number	1	2	3	4	5	6	7
Roman Numeral							

Fill in the following table. Write formulas and names for compounds formed from the following pairs of ions (all the cations are transition metal ions). Each “graded” answer is worth 2 points.

Ions	Chemical Formula of Compound	Name of Compound
2) $\text{Fe}^{3+}, \text{O}^{2-}$		
3) $\text{Zn}^{2+}, \text{O}^{2-}$		
4) $\text{Ag}^{1+}, \text{P}^{3-}$		
5) $\text{Ti}^{4+}, \text{O}^{2-}$	Graded.	Graded.
6) $\text{V}^{4+}, \text{S}^{2-}$	Graded.	Graded.
7) $\text{Cr}^{6+}, \text{N}^{3-}$	Graded.	Graded.

Write the correct chemical formulas for the ionic compounds named.

Name of Compound	Chemical Formula of Compound
8) Zinc (II) Chloride	
9) Copper (I) Iodide	
10) Graded. Copper (II) Bromide	
11) Graded. Gold (III) Selenide	
12) Graded. Chromium (IV) Oxide	
13) Graded. Chromium (III) Sulfide	

Write the correct names for the compounds given.

Chemical Formula of Compound	Name of Compound
14) VBr_4	
15) VF_3	
16) V_2O_5	
17) Graded. ScN	
18) Graded. ZnS	
19) Graded. AgCl	

Selected Answers

1) What are the roman numeral equivalents for the following numbers?

Number	1	2	3	4	5	6	7
Roman Numeral	I	II	III	IV	V	VI	VII

Fill in the following table. Write formulas and names for compounds formed from the following pairs of ions (all the cations are transition metal ions). Each "graded" answer is worth 2 points.

2) $\text{Fe}^{3+}, \text{O}^{2-}$	Fe_2O_3	Iron (III) Oxide
3) $\text{Zn}^{2+}, \text{O}^{2-}$	ZnO	Zinc (II) Oxide
4) $\text{Ag}^{1+}, \text{P}^{3-}$	Ag_3P	Silver (I) Phosphide

Remember that the roman numeral used in the name equals the oxidation number (charge) of the transition metal ion.

Write the correct chemical formulas for the ionic compounds named.

Name of Compound	Chemical Formula of Compound
8) Zinc (II) Chloride	ZnCl_2
9) Copper (I) Iodide	CuI

To figure out what the charge of the cation (transition metal ion) is, use the roman numeral. To figure out what the charge of the anion (non-metal ion) is, use the periodic table to help.

Write the correct names for the compounds given.

Chemical Formula of Compound	Name of Compound
14) VBr_4	Vanadium (IV) Bromide
15) VF_3	Vanadium (III) Fluoride
16) V_2O_5	Vanadium (V) Oxide