

## Naming Compounds Test Review Practice

Name the following ionic compounds:

- 1)  $\text{NH}_4\text{Cl}$  \_\_\_\_\_
- 2)  $\text{Fe}(\text{NO}_3)_3$  \_\_\_\_\_
- 3)  $\text{TiBr}_3$  \_\_\_\_\_
- 4)  $\text{Cu}_3\text{P}$  \_\_\_\_\_
- 5)  $\text{SnSe}_2$  \_\_\_\_\_
- 6)  $\text{GaAs}$  \_\_\_\_\_
- 7)  $\text{Pb}(\text{SO}_4)_2$  \_\_\_\_\_
- 8)  $\text{Be}(\text{HCO}_3)_2$  \_\_\_\_\_
- 9)  $\text{Mn}_2(\text{SO}_3)_3$  \_\_\_\_\_
- 10)  $\text{Al}(\text{CN})_3$  \_\_\_\_\_

Write the formulas for the following compounds:

- 11) chromium (VI) phosphate \_\_\_\_\_
- 12) vanadium (IV) carbonate \_\_\_\_\_
- 13) tin (II) nitrite \_\_\_\_\_
- 14) cobalt (III) oxide \_\_\_\_\_
- 15) titanium (II) acetate \_\_\_\_\_
- 16) vanadium (V) sulfide \_\_\_\_\_
- 17) chromium (III) hydroxide \_\_\_\_\_
- 18) lithium iodide \_\_\_\_\_
- 19) lead (II) nitride \_\_\_\_\_
- 20) silver bromide \_\_\_\_\_
- 21)  $\text{NaBr}$  \_\_\_\_\_
- 22)  $\text{Sc}(\text{OH})_3$  \_\_\_\_\_
- 23)  $\text{V}_2(\text{SO}_4)_3$  \_\_\_\_\_
- 24)  $\text{NH}_4\text{F}$  \_\_\_\_\_
- 25)  $\text{CaCO}_3$  \_\_\_\_\_
- 26)  $\text{NiPO}_4$  \_\_\_\_\_
- 27)  $\text{Li}_2\text{SO}_3$  \_\_\_\_\_
- 28)  $\text{Zn}_3\text{P}_2$  \_\_\_\_\_
- 29)  $\text{Sr}(\text{C}_2\text{H}_3\text{O}_2)_2$  \_\_\_\_\_
- 30)  $\text{Cu}_2\text{O}$  \_\_\_\_\_
- 31)  $\text{Ag}_3\text{PO}_4$  \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

- 32)  $\text{YClO}_3$  \_\_\_\_\_  
33)  $\text{SnS}_2$  \_\_\_\_\_  
34)  $\text{Ti}(\text{CN})_4$  \_\_\_\_\_  
35)  $\text{KMnO}_4$  \_\_\_\_\_  
36)  $\text{Pb}_3\text{N}_2$  \_\_\_\_\_  
37)  $\text{CoCO}_3$  \_\_\_\_\_  
38)  $\text{CdSO}_3$  \_\_\_\_\_  
39)  $\text{Cu}(\text{NO}_2)_2$  \_\_\_\_\_  
40)  $\text{Fe}(\text{HCO}_3)_2$  \_\_\_\_\_

*Write the formulas for the following ionic compounds:*

- 41) lithium acetate \_\_\_\_\_  
42) iron (II) phosphate \_\_\_\_\_  
43) titanium (II) selenide \_\_\_\_\_  
44) calcium bromide \_\_\_\_\_  
45) gallium chloride \_\_\_\_\_  
46) sodium hydride \_\_\_\_\_  
47) beryllium hydroxide \_\_\_\_\_  
48) zinc carbonate \_\_\_\_\_  
49) manganese (VII) arsenide \_\_\_\_\_  
50) copper (II) chlorate \_\_\_\_\_  
51) cobalt (III) chromate \_\_\_\_\_  
52) ammonium oxide \_\_\_\_\_  
53) potassium hydroxide \_\_\_\_\_  
54) lead (IV) sulfate \_\_\_\_\_  
55) silver cyanide \_\_\_\_\_  
56) vanadium (V) nitride \_\_\_\_\_  
57) strontium acetate \_\_\_\_\_  
58) molybdenum sulfate \_\_\_\_\_  
59) platinum (II) sulfide \_\_\_\_\_  
60) ammonium sulfate \_\_\_\_\_  
61)  $\text{NaBr}$  \_\_\_\_\_  
62)  $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$  \_\_\_\_\_  
63)  $\text{P}_2\text{O}_5$  \_\_\_\_\_  
64)  $\text{Ti}(\text{SO}_4)_2$  \_\_\_\_\_  
65)  $\text{FePO}_4$  \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

- 66)  $K_3N$  \_\_\_\_\_  
67)  $SO_2$  \_\_\_\_\_  
68)  $CuOH$  \_\_\_\_\_  
69)  $Zn(NO_2)_2$  \_\_\_\_\_  
70)  $V_2S_3$  \_\_\_\_\_

Write the formulas for the following chemical compounds:

- 71) silicon dioxide \_\_\_\_\_  
72) nickel (III) sulfide \_\_\_\_\_  
73) manganese (II) phosphate \_\_\_\_\_  
74) silver acetate \_\_\_\_\_  
75) diboron tetrabromide \_\_\_\_\_  
76) magnesium sulfate heptahydrate \_\_\_\_\_  
77) potassium carbonate \_\_\_\_\_  
78) ammonium oxide \_\_\_\_\_  
79) tin (IV) selenide \_\_\_\_\_  
80) carbon tetrachloride \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 81) Which of the following pairs of elements would most likely form an ionic compound?  
A) Ca and Ni  
B) Cu and Ar  
C) F and S  
D) Zn and K  
E) Na and Cl
- 82) Electronegativity is a concept that is useful along with other concepts in \_\_\_\_\_.  
A) deciding how many electrons are involved in bonding  
B) deciding if double bonds are present in a molecule  
C) formulating a statement of the octet rule  
D) determining the number of single bonds present in a molecule  
E) predicting the polarity of a bond
- 83) Which statement about electronegativity is incorrect?  
A) Within a periodic table group, electronegativity increases from bottom to top.  
B) Metals generally have higher electronegativity values than nonmetals.  
C) Within a periodic table row, electronegativity increases from left to right.  
D) Fluorine is the most electronegative atom of all the elements.

Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

84) Which of the following pairs is incorrectly matched? formula bond type

- A) CuO ionic
- B) BBr<sub>3</sub> nonpolar covalent
- C) CCl<sub>4</sub> polar covalent
- D) KCl ionic
- E) IF nonpolar covalent 1

85) Which of the following pairs is incorrectly matched? formula bond type

- A) MgO ionic
- B) CoS ionic
- C) CH<sub>4</sub> polar covalent
- D) NF<sub>3</sub> polar covalent
- E) N<sub>2</sub> nonpolar covalent

87) Elements in groups IIA and VA of the periodic table possess, respectively, how many valence electrons?

- A) 2 and 6
- B) 2 and 2
- C) 6 and 2
- D) 3 and 4
- E) 2 and 5

88) Which of the following statements about the noble gases is incorrect?

- A) All have very stable electron arrangements.
- B) They are the most reactive of all gases.
- C) All have 8 valence electrons.
- D) All exist in nature as individual atoms rather than molecular form.

89) Which of the following statements concerning double covalent bonds is correct?

- A) They always involve the sharing of 2 electron pairs.
- B) They are found only in molecules containing polyatomic ions.
- C) They occur only between atoms containing 4 valence electrons.
- D) They are found only in molecules containing S.

Name the following acids and bases:

90) NaOH \_\_\_\_\_

91) H<sub>2</sub>SO<sub>3</sub> \_\_\_\_\_

92) H<sub>2</sub>S \_\_\_\_\_

93) H<sub>3</sub>P \_\_\_\_\_

94) H<sub>3</sub>PO<sub>4</sub> \_\_\_\_\_

95) NH<sub>3</sub> \_\_\_\_\_

96) HCN \_\_\_\_\_

97) Ca(OH)<sub>2</sub> \_\_\_\_\_

98) Fe(OH)<sub>3</sub> \_\_\_\_\_

Write the formulas of the following acids and bases:

Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

99) hydrobromic acid \_\_\_\_\_

100) hydrofluoric acid \_\_\_\_\_

101) carbonic acid \_\_\_\_\_

102) lithium hydroxide \_\_\_\_\_

103) nitrous acid \_\_\_\_\_

104) cobalt (II) hydroxide \_\_\_\_\_

105) sulfuric acid \_\_\_\_\_

106) beryllium hydroxide \_\_\_\_\_

**Solutions for the Naming Ionic Compounds Practice Worksheet**

- 1) ammonium chloride
- 2) iron (III) nitrate
- 3) titanium (III) bromide
- 4) copper (I) phosphide
- 5) tin (IV) selenide
- 6) gallium arsenide
- 7) lead (IV) sulfate
- 8) beryllium bicarbonate
- 9) manganese (III) sulfite
- 10) aluminum cyanide
  
- 11)  $\text{Cr}(\text{PO}_4)_2$
- 12)  $\text{V}(\text{CO}_3)_2$
- 13)  $\text{Sn}(\text{NO}_2)_2$
- 14)  $\text{Co}_2\text{O}_3$
- 15)  $\text{Ti}(\text{C}_2\text{H}_3\text{O}_2)_2$
- 16)  $\text{V}_2\text{S}_5$
- 17)  $\text{Cr}(\text{OH})_3$
- 18)  $\text{LiI}$
- 19)  $\text{Pb}_3\text{N}_2$
- 20)  $\text{AgBr}$
- 21)  $\text{NaBr}$  sodium bromide
- 22)  $\text{Sc}(\text{OH})_3$  scandium (III) hydroxide
- 23)  $\text{V}_2(\text{SO}_4)_3$  vanadium (III) sulfate
- 24)  $\text{NH}_4\text{F}$  ammonium fluoride
- 25)  $\text{CaCO}_3$  calcium carbonate
- 26)  $\text{NiPO}_4$  nickel (III) phosphate
- 27)  $\text{Li}_2\text{SO}_3$  lithium sulfite
- 28)  $\text{Zn}_3\text{P}_2$  zinc phosphide
- 29)  $\text{Sr}(\text{C}_2\text{H}_3\text{O}_2)_2$  strontium acetate
- 30)  $\text{Cu}_2\text{O}$  copper (I) oxide
- 31)  $\text{Ag}_3\text{PO}_4$  silver phosphate
- 32)  $\text{YClO}_3$  yttrium (I) chlorate
- 33)  $\text{SnS}_2$  tin (IV) sulfide
- 34)  $\text{Ti}(\text{CN})_4$  titanium (IV) cyanide
- 35)  $\text{KMnO}_4$  potassium permanganate
- 36)  $\text{Pb}_3\text{N}_2$  lead (II) nitride
- 37)  $\text{CoCO}_3$  cobalt (II) carbonate
- 38)  $\text{CdSO}_3$  cadmium sulfite
- 39)  $\text{Cu}(\text{NO}_2)_2$  copper (II) nitrite
- 40)  $\text{Fe}(\text{HCO}_3)_2$  iron (II) bicarbonate

Name the following chemical compounds:

- 41) lithium acetate  $\text{LiC}_2\text{H}_3\text{O}_2$
- 42) iron (II) phosphate  $\text{Fe}_3(\text{PO}_4)_2$
- 43) titanium (II) selenide  $\text{TiSe}$

44)	calcium bromide	<b>CaBr<sub>2</sub></b>
45)	gallium (III) chloride	<b>GaCl<sub>3</sub></b>
46)	sodium hydride	<b>NaH</b>
47)	beryllium hydroxide	<b>Be(OH)<sub>2</sub></b>
48)	zinc carbonate	<b>ZnCO<sub>3</sub></b>
49)	manganese (VII) arsenide	<b>Mn<sub>3</sub>As<sub>7</sub></b>
50)	copper (II) chlorate	<b>Cu(ClO<sub>3</sub>)<sub>2</sub></b>
51)	cobalt (III) chromate	<b>Co<sub>2</sub>(CrO<sub>4</sub>)<sub>3</sub></b>
52)	ammonium oxide	<b>(NH<sub>4</sub>)<sub>2</sub>O</b>
33)	potassium hydroxide	<b>KOH</b>
54)	lead (IV) sulfate	<b>Pb(SO<sub>4</sub>)<sub>2</sub></b>
55)	silver cyanide	<b>AgCN</b>
56)	vanadium (V) nitride	<b>V<sub>3</sub>N<sub>5</sub></b>
57)	strontium acetate	<b>Sr(C<sub>2</sub>H<sub>3</sub>O<sub>2</sub>)<sub>2</sub></b>
58)	molybdenum (VI) sulfate	<b>Mo(SO<sub>4</sub>)<sub>3</sub></b>
59)	platinum (II) sulfide	<b>PtS</b>
60)	ammonium sulfate	<b>(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub></b>
61)	NaBr	<b>sodium bromide</b>
62)	Ca(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub>	<b>calcium acetate</b>
63)	P <sub>2</sub> O <sub>5</sub>	<b>diphosphorus pentoxide</b>
64)	Ti(SO <sub>4</sub> ) <sub>2</sub>	<b>titanium(IV) sulfate</b>
65)	FePO <sub>4</sub>	<b>iron (III) phosphate</b>
66)	K <sub>3</sub> N	<b>potassium nitride</b>
67)	SO <sub>2</sub>	<b>sulfur dioxide</b>
68)	CuOH	<b>copper (I) hydroxide</b>
69)	Zn(NO <sub>2</sub> ) <sub>2</sub>	<b>zinc nitrite</b>
70)	V <sub>2</sub> S <sub>3</sub>	<b>vanadium (III) sulfide</b>

*Write the formulas for the following chemical compounds:*

71)	silicon dioxide	<b>SiO<sub>2</sub></b>
72)	nickel (III) sulfide	<b>Ni<sub>2</sub>S<sub>3</sub></b>
73)	manganese (II) phosphate	<b>Mn<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub></b>
74)	silver acetate	<b>AgC<sub>2</sub>H<sub>3</sub>O<sub>2</sub></b>
75)	diboron tetrabromide	<b>B<sub>2</sub>Br<sub>4</sub></b>
76)	magnesium sulfate heptahydrate	<b>MgSO<sub>4</sub>·7H<sub>2</sub>O</b>
77)	potassium carbonate	<b>K<sub>2</sub>CO<sub>3</sub></b>
78)	ammonium oxide	<b>(NH<sub>4</sub>)<sub>2</sub>O</b>
79)	tin (IV) selenide	<b>SnSe<sub>2</sub></b>
80)	carbon tetrachloride	<b>CCl<sub>4</sub></b>

81) Which of the following pairs of elements would most likely form an ionic compound?

- A) Ca and Ni (both metals)
- B) Cu and Ar (Noble gases normally do not bond)
- C) F and S (both non-metals)
- D) Zn and K (both metals)

**E) Na and Cl**

- 82) Electronegativity is a concept that is useful along with other concepts in \_\_\_\_\_.
- A) deciding how many electrons are involved in bonding
  - B) deciding if double bonds are present in a molecule
  - C) formulating a statement of the octet rule
  - D) determining the number of single bonds present in a molecule
  - E) predicting the polarity of a bond**
- 83) Which statement about electronegativity is **incorrect?**
- A) Within a periodic table group, electronegativity increases from bottom to top.
  - B) Metals generally have higher electronegativity values than nonmetals.**
  - C) Within a periodic table row, electronegativity increases from left to right.
  - D) Fluorine is the most electronegative atom of all the elements.
- 84) Which of the following pairs is incorrectly matched? formula bond type
- A) CuO ionic
  - B) BBr<sub>3</sub> nonpolar covalent
  - C) CCl<sub>4</sub> polar covalent
  - D) KCl ionic
  - E) IF nonpolar covalent**
- 85) Which of the following pairs is incorrectly matched? formula bond type
- A) MgO ionic
  - B) CoS ionic
  - C) CH<sub>4</sub> polar covalent
  - D) NF<sub>3</sub> polar covalent
  - E) N<sub>2</sub> nonpolar covalent**
- 87) Elements in groups IIA and VA of the periodic table possess, respectively, how many valence electrons?
- A) 2 and 6
  - B) 2 and 2
  - C) 6 and 2
  - D) 3 and 4
  - E) 2 and 5**
- 88) Which of the following statements about the noble gases is **incorrect?**
- A) All have very stable electron arrangements.
  - B) They are the most reactive of all gases.**
  - C) All have 8 valence electrons.
  - D) All exist in nature as individual atoms rather than molecular form.
- 89) Which of the following statements concerning double covalent bonds is **correct?**
- A) They always involve the sharing of 2 electron pairs.**
  - B) They are found only in molecules containing polyatomic ions.
  - C) They occur only between atoms containing 4 valence electrons.
  - D) They are found only in molecules containing S.

**Name the following acids and bases:**

- 90) NaOH     sodium hydroxide  
91) H<sub>2</sub>SO<sub>3</sub>     sulfurous acid  
92) H<sub>2</sub>S     hydrosulfuric acid



Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

93)  $\text{H}_3\text{P}$  hydrophosphoric acid

94)  $\text{H}_3\text{PO}_4$  phosphoric acid

95)  $\text{NH}_3$  ammonia

96)  $\text{HCN}$  hydrocyanic acid

97)  $\text{Ca}(\text{OH})_2$  calcium hydroxide

98)  $\text{Fe}(\text{OH})_3$  iron (III) hydroxide

**Write the formulas of the following acids and bases:**

99) hydrobromic acid  $\text{HBr}$

100) hydrofluoric acid  $\text{HF}$

101) carbonic acid  $\text{H}_2\text{CO}_3$

102) lithium hydroxide  $\text{LiOH}$

103) nitrous acid  $\text{HNO}_2$

104) cobalt (II) hydroxide  $\text{Co}(\text{OH})_2$

105) sulfuric acid  $\text{H}_2\text{SO}_4$

106) beryllium hydroxide  $\text{Be}(\text{OH})_2$