Name ______________________________________ Date______________ Block ___

**Naming Compounds Test Review Practice**

**Name the following ionic compounds:**

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

**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) \( \text{Sc(OH)}_3 \) _____________________________________
23) \( \text{V}_2\text{(SO}_4\text{)_3} \) _____________________________________
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) \( \text{Sr(C}_2\text{H}_3\text{O}_2\text{)_2} \) _____________________________________
30) \( \text{Cu}_2\text{O} \) _____________________________________
31) \( \text{Ag}_3\text{PO}_4 \) _____________________________________
Write the formulas for the following ionic compounds:

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>YClO₃</td>
<td>YClO₃</td>
</tr>
<tr>
<td>33</td>
<td>SnS₂</td>
<td>SnS₂</td>
</tr>
<tr>
<td>34</td>
<td>Ti(CN)₄</td>
<td>Ti(CN)₄</td>
</tr>
<tr>
<td>35</td>
<td>KMnO₄</td>
<td>KMnO₄</td>
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<tr>
<td>36</td>
<td>Pb₃N₂</td>
<td>Pb₃N₂</td>
</tr>
<tr>
<td>37</td>
<td>CoCO₃</td>
<td>CoCO₃</td>
</tr>
<tr>
<td>38</td>
<td>CdSO₃</td>
<td>CdSO₃</td>
</tr>
<tr>
<td>39</td>
<td>Cu(NO₂)₂</td>
<td>Cu(NO₂)₂</td>
</tr>
<tr>
<td>40</td>
<td>Fe(HCO₃)₂</td>
<td>Fe(HCO₃)₂</td>
</tr>
<tr>
<td>41</td>
<td>lithium acetate</td>
<td>Li(CH₃COO)₂</td>
</tr>
<tr>
<td>42</td>
<td>iron (II) phosphate</td>
<td>FePO₄</td>
</tr>
<tr>
<td>43</td>
<td>titanium (II) selenide</td>
<td>TiSe₂</td>
</tr>
<tr>
<td>44</td>
<td>calcium bromide</td>
<td>CaBr₂</td>
</tr>
<tr>
<td>45</td>
<td>gallium chloride</td>
<td>GaCl₃</td>
</tr>
<tr>
<td>46</td>
<td>sodium hydride</td>
<td>NaH</td>
</tr>
<tr>
<td>47</td>
<td>beryllium hydroxide</td>
<td>Be(OH)₂</td>
</tr>
<tr>
<td>48</td>
<td>zinc carbonate</td>
<td>ZnCO₃</td>
</tr>
<tr>
<td>49</td>
<td>manganese (VII) arsenide</td>
<td>Mn₃As₂</td>
</tr>
<tr>
<td>50</td>
<td>copper (II) chlorate</td>
<td>CuCl₂</td>
</tr>
<tr>
<td>51</td>
<td>cobalt (III) chromate</td>
<td>Co₂CrO₄</td>
</tr>
<tr>
<td>52</td>
<td>ammonium oxide</td>
<td>NH₃</td>
</tr>
<tr>
<td>53</td>
<td>potassium hydroxide</td>
<td>KOH</td>
</tr>
<tr>
<td>54</td>
<td>lead (IV) sulfate</td>
<td>PbSO₄</td>
</tr>
<tr>
<td>55</td>
<td>silver cyanide</td>
<td>AgCN</td>
</tr>
<tr>
<td>56</td>
<td>vanadium (V) nitride</td>
<td>V₅N₈</td>
</tr>
<tr>
<td>57</td>
<td>strontium acetate</td>
<td>Sr(CH₃COO)₂</td>
</tr>
<tr>
<td>58</td>
<td>molybdenum sulfate</td>
<td>MoO₃</td>
</tr>
<tr>
<td>59</td>
<td>platinum (II) sulfide</td>
<td>PtS</td>
</tr>
<tr>
<td>60</td>
<td>ammonium sulfate</td>
<td>(NH₄)₂SO₄</td>
</tr>
<tr>
<td>61</td>
<td>NaBr</td>
<td>NaBr</td>
</tr>
<tr>
<td>62</td>
<td>Ca(C₂H₃O₂)₂</td>
<td>Ca(C₂H₃O₂)₂</td>
</tr>
<tr>
<td>63</td>
<td>P₂O₅</td>
<td>P₂O₅</td>
</tr>
<tr>
<td>64</td>
<td>Ti(SO₄)₂</td>
<td>Ti(SO₄)₂</td>
</tr>
<tr>
<td>65</td>
<td>FePO₄</td>
<td>FePO₄</td>
</tr>
</tbody>
</table>
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 a 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.
84) Which of the following pairs is incorrectly matched? formula bond type
   A) CuO ionic
   B) BBr₃ nonpolar covalent
   C) CCl₄ 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) CH₄ polar covalent
   D) NF₃ polar covalent
   E) N₂ 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) H₂SO₃
92) H₂S
93) H₃P
94) H₃PO₄
95) NH₃
96) HCN
97) Ca(OH)₂
98) Fe(OH)₃

Write the formulas of the following acids and bases:
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) Cr(PO₄)₂
12) V(CO₃)₂
13) Sn(NO₂)₂
14) Co₂O₃
15) Ti(C₂H₃O₂)₂
16) V₂S₅
17) Cr(OH)₃
18) Lil
19) Pb₃N₂
20) AgBr

21) NaBr  sodium bromide
22) Sc(OH)₃  scandium (III) hydroxide
23) V₂(SO₄)₃  vanadium (III) sulfate
24) NH₄F  ammonium fluoride
25) CaCO₃  calcium carbonate
26) NiPO₄  nickel (III) phosphate
27) Li₂SO₃  lithium sulfite
28) Zn₃P₂  zinc phosphate
29) Sr(C₂H₃O₂)₂  strontium acetate
30) Cu₂O  copper (I) oxide
31) Ag₃PO₄  silver phosphate
32) YClO₃  yttrium (I) chloride
33) SnS₂  tin (IV) sulfide
34) Ti(CN)₄  titanium (IV) cyanide
35) KMnO₄  potassium permanganate
36) Pb₃N₂  lead (II) nitride
37) CoCO₃  cobalt (II) carbonate
38) CdSO₃  cadmium sulfite
39) Cu(NO₂)₂  copper (II) nitrite
40) Fe(HCO₃)₂  iron (II) bicarbonate

Name the following chemical compounds:

41) lithium acetate  LiC₂H₃O₂
42) iron (II) phosphate  Fe₂(PO₄)₂
43) titanium (II) selenide  TiSe
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<td>potassium nitride</td>
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<td>CuOH</td>
<td>copper (I) hydroxide</td>
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<td>Zn(NO₂)₂</td>
<td>zinc nitrite</td>
</tr>
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<td>CCl₄</td>
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103) nitrous acid \( \text{HNO}_2 \)
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