

College-prep Chemistry  
Chapters 6-7  
Science Reasoning

Write the names of the following compounds. Explain how you determined it's name.

1.  $\text{CaBr}_2$

Explanation:

Answer:

2.  $\text{FeCl}_3$

Explanation:

Answer:

3.  $\text{SO}_3$

Explanation:

Answer:

4.  $\text{Pb}(\text{OH})_2$

Explanation:

Answer:

Write the formulas of the following compounds and explain how you determined the answer.

5. calcium oxide

Explanation:

Answer:

6. antimony pentasulfide

Explanation:

Answer:

7. barium hydroxide

Explanation:

Answer:

8. manganese (II) hydroxide

Explanation:

Answer:

9. What is the molecular weight (molar mass) of  $\text{NiSO}_4$ ?

Answer:

Explanation:

10. How many grams would 0.736 moles of  $\text{H}_2\text{SO}_4$  weigh?

Answer:

Explanation:

11. What is the percent of bismuth in sodium bismuthate,  $\text{NaBiO}_3$ ?

Answer:

Explanation:

12. Determine the empirical formula of a substance analyzed to contain 42.5% chromium and 57.5% chlorine.

Answer:

Explanation:

13. Determine the molecular formula of a substance composed of 76.0% iodine and 24.0% oxygen and a molecular weight of 334 grams.

Answer:

Explanation:

14. Draw the electron dot formula for a compound composed of one atom of nitrogen and three atoms of hydrogen. Determine the shape of the molecule.

Answer:

Explanation:

b. What is the shape of the molecule?

Answer:

Explanation:

c. What type of bonds exist between the atoms in the molecule?

Answer:

Explanation:

d. Is the molecule polar or nonpolar?

Answer:

Explanation:

15a. Draw the electron dot formula for a compound composed of one atom of boron and three atoms of fluorine.

Answer:

Explanation:

b. What is the shape of the molecule?

Answer:

Explanation:

c. What type of bonds exist between the atoms in the molecule?

Answer:

Explanation:

d. Is the molecule polar or nonpolar?

Answer:

Explanation:

## Compound Naming Race

Be the first team in the room to correctly get all the names on this sheet right. When you have finished the first ten problems, bring them up to the teacher to be checked. Once these have been checked, move to the second ten. Once all forty problems have been solved, you're the winner!

- 1) copper (II) acetate \_\_\_\_\_
- 2) sodium hydroxide \_\_\_\_\_
- 3) lithium oxide \_\_\_\_\_
- 4) cobalt (III) carbonate \_\_\_\_\_
- 5) aluminum sulfide \_\_\_\_\_
- 6) ammonium cyanide \_\_\_\_\_
- 7) iron (III) phosphide \_\_\_\_\_
- 8) vanadium (V) phosphate \_\_\_\_\_
- 9) sodium permanganate \_\_\_\_\_
- 10) manganese (III) fluoride \_\_\_\_\_
  
- 11) beryllium nitrate \_\_\_\_\_
- 12) nickel (III) sulfite \_\_\_\_\_
- 13) potassium oxide \_\_\_\_\_
- 14) silver bromide \_\_\_\_\_
- 15) zinc phosphate \_\_\_\_\_
- 16) copper (II) bicarbonate \_\_\_\_\_
- 17) nickel (II) selenide \_\_\_\_\_
- 18) manganese (IV) carbonate \_\_\_\_\_
- 19) lead (IV) nitride \_\_\_\_\_
- 20) tin (II) hydroxide \_\_\_\_\_

- 21) lithium arsenide \_\_\_\_\_
- 22) chromium (VI) sulfate \_\_\_\_\_
- 23) calcium bromide \_\_\_\_\_
- 24) ammonium sulfate \_\_\_\_\_
- 25) copper (II) oxide \_\_\_\_\_
- 26) platinum (IV) phosphate \_\_\_\_\_
- 27) aluminum carbonate \_\_\_\_\_
- 28) silver nitrate \_\_\_\_\_
- 29) magnesium acetate \_\_\_\_\_
- 30) nickel (III) cyanide \_\_\_\_\_
  
- 31) vanadium (IV) phosphate \_\_\_\_\_
- 32) silver sulfate \_\_\_\_\_
- 33) cobalt (III) sulfide \_\_\_\_\_
- 34) iron (II) sulfite \_\_\_\_\_
- 35) copper (II) nitrite \_\_\_\_\_
- 36) nickel (II) hydroxide \_\_\_\_\_
- 37) zinc nitride \_\_\_\_\_
- 38) manganese (VII) nitrate \_\_\_\_\_
- 39) gallium sulfate \_\_\_\_\_
- 40) sodium nitrate \_\_\_\_\_