

- Which formula represents strontium phosphate?
A) SrPO_4 B) Sr_3PO_8
C) $\text{Sr}_2(\text{PO}_4)_3$ D) $\text{Sr}_3(\text{PO}_4)_2$
- What is the chemical formula for iron(III) oxide?
A) FeO B) Fe_2O_3 C) Fe_3O D) Fe_3O_2
- What is the total number of different elements present in NH_4NO_3 ?
A) 7 B) 9 C) 3 D) 4
- A metal, M , forms an oxide compound with the general formula $M_2\text{O}$. In which group on the Periodic Table could metal M be found?
A) Group 1 B) Group 2
C) Group 16 D) Group 17
- What is the chemical formula for copper(II) hydroxide?
A) CuOH B) CuOH_2
C) $\text{Cu}_2(\text{OH})$ D) $\text{Cu}(\text{OH})_2$
- Atoms of which set of elements all exhibit the same oxidation state?
A) H, He, Li B) He, F, C
C) Be, Ca, Sr D) B, Si, As
- Which formula correctly represents the composition of iron (III) oxide?
A) FeO_3 B) Fe_2O_3 C) Fe_3O D) Fe_3O_2
- The chemical formula for nickel (II) bromide is
A) Ni_2Br B) NiBr_2 C) N_2Br D) NBr_2
- Atoms of metals tend to
A) lose electrons and form negative ions
B) lose electrons and form positive ions
C) gain electrons and form negative ions
D) gain electrons and form positive ions
- An atom represented by X forms a compound with the formula $X_3\text{N}_2$. The atom could be
A) Na B) Mg C) Al D) Cs
- What is the IUPAC name for the compound FeS ?
A) iron(II) sulfate B) iron(III) sulfate
C) iron(II) sulfide D) Iron(III) sulfide
- What is the formula of titanium(II) oxide?
A) TiO B) TiO_2 C) Ti_2O D) Ti_2O_3

- The correct formula for aluminum sulfate is
A) Al_2S_3 B) Al_3S_2
C) $\text{Al}_2(\text{SO}_4)_3$ D) $\text{Al}_3(\text{SO}_4)_2$
- What is the correct name for the compound with the formula CrPO_4 ?
A) chromium (II) phosphate
B) chromium (III) phosphate
C) chromium (II) phosphide
D) chromium (III) phosphide
- What is the correct name of the compound with the formula NH_4NO_2 ?
A) ammonia nitrite B) ammonium nitrite
C) ammonia nitrate D) ammonium nitrate
- The correct formula for lead (IV) oxide is
A) PbO B) Pb_2O
C) PbO_2 D) Pb_2O_2
- What is the correct formula for iron (II) bromide?
A) FeBr_2 B) Fe_2Br
C) FeBrO_2 D) Fe_2BrO_2
- In a sample of solid $\text{Ba}(\text{NO}_3)_2$, the ratio of barium ions to nitrate ions is
A) 1:1 B) 1:2 C) 1:3 D) 1:6
- Which is the correct formula for titanium (III) oxide?
A) Ti_2O_3 B) TiO C) Ti_3O_2 D) Ti_2O_4
- What is the correct formula of potassium hydride?
A) KH B) KH_2
C) KOH D) $\text{K}(\text{OH})_2$
- Which formula contains only two elements?
A) KOH B) NaClO_3
C) Al_2S_3 D) $\text{Bi}(\text{NO}_3)_3$
- Base your answer to the following question on the information below.

A metal, M , was obtained from a compound in a rock sample. Experiments have determined that the element is a member of Group 2 on the Periodic Table of the Elements.

Using the symbol M for the element, write the chemical formula for the compound that forms when element M reacts with iodine.

23. In the 19th century, Dmitri Mendeleev predicted the existence of a then unknown element X with a mass of 68. He also predicted that an oxide of X would have the formula X_2O_3 . On the modern Periodic Table, what is the group number and period number of element X ?

24. Base your answer to the following question on the information below.

A safe level of fluoride ions is added to many public drinking water supplies. Fluoride ions have been found to help prevent tooth decay. Another common source of fluoride ions is toothpaste. One of the fluoride compounds used in toothpaste is tin (II) fluoride.

A town located downstream from a chemical plant was concerned about fluoride ions from the plant leaking into its drinking water. According to the Environmental Protection Agency, the fluoride ion concentration in drinking water cannot exceed 4 ppm. The town hired a chemist to analyze its water. The chemist determined that a 175-gram sample of the town's water contains 0.000 250 grams of fluoride ions.

What is the chemical formula for tin (II) fluoride?

25. What is the chemical formula for sodium sulfate?

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| A) Na_2SO_3 | B) Na_2SO_4 |
| C) $NaSO_3$ | D) $NaSO_4$ |

26. Which is the formula for the compound that forms when magnesium bonds with phosphorus?

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| A) Mg_2P | B) MgP_2 |
| C) Mg_2P_3 | D) Mg_3P_2 |

27. Element X is a metal that forms an oxide with the formula X_2O . Element X is in group

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| A) 1 | B) 2 | C) 3 | D) 4 |
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28. What is the correct name of Fe_2O_3 ?

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| A) iron (I) oxide | B) iron (II) oxide |
| C) iron (III) oxide | D) iron (V) oxide |

29. Which formula represents sodium sulfate?

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| A) $NaSO_4$ | B) $NaSO_3$ |
| C) Na_2SO_4 | D) Na_2SO_3 |

30. In the formula $X_2(SO_4)_3$, the X represents a metal. This metal could be located on the Periodic Table in

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| A) Group 1 | B) Group 2 |
| C) Group 13 | D) Group 14 |

31. Which formula represents lead(II) chromate?

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| A) $PbCrO_4$ | B) $Pb(CrO_4)_2$ |
| C) Pb_2CrO_4 | D) $Pb_2(CrO_4)_3$ |