

Question 1: Label each compound below as ionic or covalent.

H₂O _____

LiBr _____

KCl _____

C₁₂H₂₂O₁₁ _____

NaNO₃ _____

CO₂ _____

Question 2: How many protons and electrons are present in each **ion** below?

Br⁻ protons _____ electrons _____

O²⁻ protons _____ electrons _____

Ag⁺ protons _____ electrons _____

P³⁻ protons _____ electrons _____

Fe²⁺ protons _____ electrons _____

Al³⁺ protons _____ electrons _____

Li⁺ protons _____ electrons _____

Question 3: Using the number of protons and electrons in each ion below, give the proper symbol for the ion (ie Fe²⁺, N³⁻, etc).

protons = 22 electrons = 18 ion symbol _____

protons = 34 electrons = 36 ion symbol _____

protons = 53 electrons = 54 ion symbol _____

protons = 87 electrons = 86 ion symbol _____

protons = 79 electrons = 76 ion symbol _____

protons = 20 electrons = 18 ion symbol _____

protons = 7 electrons = 10 ion symbol _____

Question 4: How many electrons will each main group element below lose or gain when forming an ion?

lithium _____

chlorine _____

calcium _____

selenium _____

aluminum _____

fluorine _____

sulfur _____

Question 5: Give the name of each of the following ionic compounds.

KCl _____

Rb₂O _____

AlF₃ _____

CaI₂ _____

FeI₃ _____

HgO _____

CuO _____

CoCl₂ _____

CaO _____

CsCl _____

Rb₃N _____

TiF₄ _____

K₂O _____

NiBr₂ _____

BaO _____

Na₃P _____

Mg₃N₂ _____

RaCl₂ _____

MnCl₂ _____

Cu₂O _____

SnBr₄ _____

CrBr₃ _____

PbO₂ _____

FeS _____

LiBr _____

Be₃P₂ _____

CaSe _____

NaI _____

Question 6: Give the name of each of the following ionic compounds containing polyatomic ions. I recommend using the **Exam 1 Handout** found in Module 5 for a table of polyatomic ion names.

$(\text{NH}_4)_2\text{SO}_4$ _____

$\text{Fe}_2(\text{SO}_4)_3$ _____

$\text{Be}_3(\text{PO}_4)_2$ _____

$\text{Ca}(\text{OH})_2$ _____

Li_2CO_3 _____

$\text{Cr}(\text{CN})_3$ _____

NH_4HCO_3 _____

Question 7: Give the chemical formula for each of the following ionic compounds. I recommend using the **Exam 1 Handout** found in Module 5 for a table of polyatomic ion names.

silver (I) oxide _____

aluminum sulfide _____

beryllium bromide _____

sodium chlorite _____

iron (III) oxide _____

sodium phosphate _____

ammonium chromate _____

titanium (IV) chloride _____

barium oxide _____

cobalt (III) hydroxide _____

potassium carbonate _____

lithium sulfate _____

manganese (II) sulfate _____

lead (II) sulfide _____

tin (IV) acetate	_____
potassium permanganate	_____
chromium (II) fluoride	_____
ammonium sulfite	_____
copper (I) oxide	_____
aluminum hydroxide	_____
potassium perchlorate	_____
rubidium carbonate	_____
sodium nitrite	_____