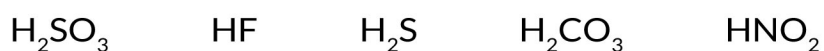


NAMING ACIDS

Acids dissolve in water (H_2O) and form ions. The following table consists of a list of binary acids. Complete the anion and the cation columns and answer the given questions.

Acid	Name of the Acid in Aqueous Solution	Cation	Anion
HF	Hydrofluoric acid		F^-
HCl	Hydrochloric acid	H_3O^+	
HBr	Hydrobromic acid		Br^-
HI	Hydroiodic acid	H_3O^+	
H_2S	Hydrosulfuric acid		S^{2-}
HCN	Hydrocyanic acid	H_3O^+	
H_3P	Hydrophosphoric acid		P^{3-}

- Why does hydrosulfuric acid contain two hydrogens?
- What prefix is used at the beginning of the name for all binary acids?
- What suffix is used at the end of the name for all binary acids?
- Why are the above acids called binary acids?
- Write a rule for naming binary acid.
- Circle the acid(s) that would be named with the prefix "hydro-".



NAMING ACIDS

Answers

Acids dissolve in water (H_2O) and form ions. The following table consists of a list of binary acids. Complete the anion and the cation columns and answer the given questions.

Acid	Name of the Acid in Aqueous Solution	Cation	Anion
HF	Hydrofluoric acid	H_3O^+	F^-
HCl	Hydrochloric acid	H_3O^+	Cl^-
HBr	Hydrobromic acid	H_3O^+	Br^-
HI	Hydroiodic acid	H_3O^+	I^-
H_2S	Hydrosulfuric acid	$2\text{H}_3\text{O}^+$	S^{2-}
HCN	Hydrocyanic acid	H_3O^+	CN^-
H_3P	Hydrophosphoric acid	$3\text{H}_3\text{O}^+$	P^{3-}

a) Why does hydrosulfuric acid contain two hydrogens?

Because sulfur (S) has a charge of 2-

b) What prefix is used at the beginning of the name for all binary acids?

Hydro-

c) What suffix is used at the end of the name for all binary acids?

-ic

d) Why are the above acids called binary acids?

Because they contain two different types of elements

e) Write a rule for naming binary acid.

They must contain hydrogen and another type of element.

f) Circle the acid(s) that would be named with the prefix "hydro-".

