

**WKS – Chem Honors
Acids, Naming & Formulas**

NAME Answer Key
Period _____ Date _____

- What is an acid? How does it differ from a non-acidic covalent compound?
An acid is a covalent compound with an H bonded to a high electronegativity atom such as O or a halogen. This H-X bond is relatively weak and, unlike non-acidic compounds, the H can dissociate in water as H^+ and X^-
- What is a binary acid? What are the rules for naming binary acids?
A binary acid contains H and one other atom (except HCN), whose name as an anion ends in $-ide$. To name the acid, add the prefix "hydro-" (no O!), change the ending to $-ic$ and add "acid."
- What is an oxyacid? What are the rules for naming oxyacids?
An oxyacid contains H bonded to an O of an oxyanion (such as ClO_3^-). To name the acid, if the anion name ends in $-ate$ change it to $-ic$ and add "acid." If the name ends in $-ite$, change it to $-ous$ and add "acid." Keep and prefix in the anion name, such as per- or hypo-.

In the table below, determine the formula of the name of the acid from the formula. From the formula, first write the formula of the anion, then determine the anion name finally the acid name.

Formula	Anion Formula	Anion Name	Acid Name
4. HClO	ClO^-	<u>hypochlorite</u>	hypochlorous acid
5. HF	F^-	<u>fluoride</u>	hydrofluoric acid
6. H_3PO_4	PO_4^{3-}	<u>phosphate</u>	phosphoric acid
7. H_2CO_3	CO_3^{2-}	<u>carbonate</u>	carbonic acid
8. $H_2C_2O_4$	$C_2O_4^{2-}$	<u>oxalate</u>	oxalic acid
9. H_2Te	Te^{2-}	<u>telluride</u>	hydrotelluric acid

In the table below, determine the formula of the acid from its name. Determine the anion name first, then write the anion formula, and finally add enough H^+ ions to equalize charge.

Name	Anion Name	Anion Formula	Acid Formula
10. <u>bromous</u> acid	<u>bromite</u>	BrO_2^-	$HBrO_2$
11. <u>hydroiodic</u> acid	<u>iodide</u>	I^-	HI
12. <u>sulfuric</u> acid	<u>sulfate</u>	SO_4^{2-}	H_2SO_4
13. <u>hydroselenic</u> acid	<u>selenide</u>	Se^{2-}	H_2Se
14. <u>acetic</u> acid	<u>acetate</u>	$C_2H_3O_2^-$ CH_3COO^-	$HC_2H_3O_2$ CH_3COOH
15. <u>chromic</u> acid	<u>chromate</u>	CrO_4^{2-}	H_2CrO_4