SUMMARY: NAMING COMPOUNDS

Is it Binary? (2 elements)

Yes

Is it Ionic? (Metal + nonmetal)

No

Two nonmetals
1. Name least electronegative element. Use a prefix if more than one atom.
2. Name most electronegative element. Always use a prefix

No

Yes

1. Name positive ion. 
   *(Include charge in roman numerals if necessary)*
2. Name negative ion. 
   If monoatomic, name ends in *-ide* 
   If polyatomic, name ends in *-ite* or *-ate*

Not Simple

No

Is there a polyatomic ion?

Yes

No
SUMMARY: NAMING COMMON ACIDS

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Is it Binary? (hydrogen and one element)

Yes

Name begins with the prefix hydro-
then the stem name of the nonmetal atom with an -ic ending: hydro(stem name)ic acid

No

Is there a common polyatomic ion?

Yes

Nonmetal atom (middle element)

Nitrogen
2 oxygen atoms nitrous acid
3 oxygen atoms nitric acid

Halogen (Cl, Br, I)
1 oxygen atom hypo(stem name)ous acid
2 oxygen atoms (stem name)ous acid
3 oxygen atoms (stem name)ic acid
4 oxygen atoms per(stem name)ic acid

No

Organic acid or not a common acid

Other nonmetal (P, As, S, Se, Te)
3 oxygen atoms (stem name)ous acid
4 oxygen atoms (stem name)ic acid