

## Naming Acids Worksheet Answer Key PDF

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### Part 1: Foundational Knowledge

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**What is the prefix used in the naming of binary acids?**

undefined. Per-

**undefined. Hydro- ✓**

undefined. Hypo-

undefined. Meta-

The prefix used in the naming of binary acids is 'Hydro-'.

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undefined. Per-

**undefined. Hydro- ✓**

undefined. Hypo-

undefined. Meta-

The prefix used in the naming of binary acids is 'hydro-'.

**Which of the following are characteristics of acids? (Select all that apply)**

**undefined. Release hydrogen ions in water ✓**

undefined. Taste bitter

**undefined. Turn blue litmis paper red ✓**

undefined. Feel slippery

Acids release hydrogen ions in water, turn blue litimus paper red.

**Which of the following are characteristics of acids? (Select all that apply)**

**undefined. Release hydrogen ions in water ✓**

undefined. Taste bitter

**undefined. Turn blue litimus paper red ✓**

undefined. Feel slippery

Acids typically release hydrogen ions in water and turn blue litimus paper red.

**Which of the following are characteristics of acids? (Select all that apply)**

**undefined. Release hydrogen ions in water ✓**

undefined. Taste bitter

**undefined. Turn blue litimus paper red ✓**

undefined. Feel slippery

Acids typically release hydrogen ions in water and turn blue litimus paper red.

**Explain the difference between binary acids and oxyacids in terms of their composition.**

**Binary acids consist of hydrogen and one other nonmetal, while oxyacids contain hydrogen, oxygen, and another element.**

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**Binary acids consist of hydrogen and one other nonmetal, while oxyacids contain hydrogen, oxygen, and another element.**

**List the suffixes used for naming acids derived from polyatomic ions ending in "-ate" and "-ite."**

1. -ate

**-ic**

2. -ite

**-ous**

The suffix for '-ate' is '-ic' and for '-ite' is '-ous'.

List the suffixes used for naming acids derived from polyatomic ions ending in "-ate" and "-ite."

1. -ate:

**-ic**

2. -ite:

**-ous**

The suffix for '-ate' ions is '-ic' and for '-ite' ions is '-ous'.

## Part 2: Comprehension

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Which of the following is the correct name for  $\text{H}_2\text{SO}_4$ ?

undefined. Sulfurous acid

**undefined. Sulfuric acid ✓**

undefined. Hydrosulfuric acid

undefined. Sulfate acid

The correct name for  $\text{H}_2\text{SO}_4$  is 'Sulfuric acid'.

Which of the following is the correct name for  $\text{H}_2\text{SO}_4$ ?

undefined. Sulfurous acid

**undefined. Sulfuric acid ✓**

undefined. Hydrosulfuric acid

undefined. Sulfate acid

The correct name for  $\text{H}_2\text{SO}_4$  is sulfuric acid.

Which of the following is the correct name for  $\text{H}_2\text{SO}_4$ ?

undefined. Sulfurous acid

**undefined. Sulfuric acid ✓**

undefined. Hydrosulfuric acid

undefined. Sulfate acid

The correct name for  $\text{H}_2\text{SO}_4$  is sulfuric acid.

**Identify the correct names for the following acids:  $\text{HNO}_3$  and  $\text{HNO}_2$ .**

**undefined. Nitric acid and Nitrous acid ✓**

undefined. Nitrous acid and Nitric acid

undefined. Hydro nitric acid and Hydro nitrous acid

undefined. Nitrate acid and Nitrite acid

$\text{HNO}_3$  is nitric acid and  $\text{HNO}_2$  is nitrous acid.

**Identify the correct names for the following acids:  $\text{HNO}_3$  and  $\text{HNO}_2$ .**

**undefined. Nitric acid and Nitrous acid ✓**

undefined. Nitrous acid and Nitric acid

undefined. Hydro nitric acid and Hydro nitrous acid

undefined. Nitrate acid and Nitrite acid

$\text{HNO}_3$  is Nitric acid and  $\text{HNO}_2$  is Nitrous acid.

**Identify the correct names for the following acids:  $\text{HNO}_3$  and  $\text{HNO}_2$ .**

**undefined. Nitric acid and Nitrous acid ✓**

undefined. Nitrous acid and Nitric acid

undefined. Hydro nitric acid and Hydro nitrous acid

undefined. Nitrate acid and Nitrite acid

$\text{HNO}_3$  is nitric acid and  $\text{HNO}_2$  is nitrous acid.

**Describe how the naming of oxyacids is influenced by the polyatomic ions they contain.**

**The naming of oxyacids is based on the name of the polyatomic ion; '-ate' ions become '-ic' acids and '-ite' ions become '-ous' acids.**

**Describe how the naming of oxyacids is influenced by the polyatomic ions they contain.**

The naming of oxyacids is based on the name of the polyatomic ion; '-ate' becomes '-ic' and '-ite' becomes '-ous'.

Describe how the naming of oxyacids is influenced by the polyatomic ions they contain.

The naming of oxyacids is based on the polyatomic ion's name, with '-ate' ions becoming '-ic' acids and '-ite' ions becoming '-ous' acids.

### Part 3: Application and Analysis

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Given the formula  $\text{HClO}$ , what is the correct name of this acid?

undefined. Chloric acid

undefined. Hypochlorous acid ✓

undefined. Perchloric acid

undefined. Chlorous acid

The correct name for  $\text{HClO}$  is 'Hypochlorous acid'.

Given the formula  $\text{HClO}$ , what is the correct name of this acid?

undefined. Chloric acid

undefined. Hypochlorous acid ✓

undefined. Perchloric acid

undefined. Chlorous acid

The correct name for  $\text{HClO}$  is hypochlorous acid.

Given the formula  $\text{HClO}$ , what is the correct name of this acid?

undefined. Chloric acid

undefined. Hypochlorous acid ✓

undefined. Perchloric acid

undefined. Chlorous acid

The correct name for  $\text{HClO}$  is hypochlorous acid.

Which of the following formulas represent binary acids? (Select all that apply)

undefined. HBr ✓

undefined.  $\text{H}_2\text{CO}_3$

undefined. HI ✓

undefined.  $\text{HNO}_3$

HBr and HI are examples of binary acids.

Which of the following formulas represent binary acids? (Select all that apply)

undefined. HBr ✓

undefined.  $\text{H}_2\text{CO}_3$

undefined. HI ✓

undefined.  $\text{HNO}_3$

Binary acids consist of hydrogen and one other nonmetal element.

Which of the following formulas represent binary acids? (Select all that apply)

undefined. HBr ✓

undefined.  $\text{H}_2\text{CO}_3$

undefined. HI ✓

undefined.  $\text{HNO}_3$

Binary acids consist of hydrogen and one other nonmetal, such as HBr and HI.

Write the chemical formula for phosphoric acid and explain the steps involved in deriving it from its name.

The chemical formula for phosphoric acid is  $\text{H}_3\text{PO}_4$ , derived from the phosphate ion.

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Write the chemical formula for phosphoric acid and explain the steps involved in deriving it from its name.

The chemical formula for phosphoric acid is  $\text{H}_3\text{PO}_4$ , derived from the name by identifying the elements involved.

## Part 4: Evaluation and Creation

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Create a name for an acid with the formula  $\text{H}_2\text{TeO}_4$ . Which of the following names would be correct?

undefined. Telluric acid ✓

undefined. Tellurous acid

undefined. Hydrotelluric acid

undefined. Perchloric acid

The correct name for  $\text{H}_2\text{TeO}_4$  is 'Telluric acid'.

Create a name for an acid with the formula  $\text{H}_2\text{TeO}_4$ . Which of the following names would be correct?

undefined. Telluric acid ✓

undefined. Tellurous acid

undefined. Hydrotelluric acid

undefined. Perchloric acid

The correct name for  $\text{H}_2\text{TeO}_4$  is telluric acid.

Create a name for an acid with the formula  $\text{H}_2\text{TeO}_4$ . Which of the following names would be correct?

undefined. Telluric acid ✓

undefined. Tellurous acid

undefined. Hydrotelluric acid

undefined. Perchloric acid

The correct name for  $\text{H}_2\text{TeO}_4$  is telluric acid.

Evaluate the naming system for acids and propose any improvements or changes that could make it more intuitive for learners.

The naming system could be improved by simplifying the rules and providing more examples.

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The naming system could be improved by providing clearer guidelines and examples for students.

Evaluate the naming system for acids and propose any improvements or changes that could make it more intuitive for learners.

The naming system could be improved by providing clearer guidelines and examples for learners.

Given the following polyatomic ions, create the names for their corresponding acids:



**Nitric acid**



**Chlorous acid**



**Sulfuric acid**

The names for the acids are based on the polyatomic ions' endings.

Given the following polyatomic ions, create the names for their corresponding acids:



**Nitric acid**



**Chlorous acid**



**Sulfuric acid**

The names for the acids are based on the names of the polyatomic ions they derive from.

Given the following polyatomic ions, create the names for their corresponding acids:





**Nitric acid**

2.  $\text{ClO}_2^-$ :

**Chlorous acid**

3.  $\text{SO}_4^{2-}$ :

**Sulfuric acid**

The names for the acids are based on the suffixes of the polyatomic ions.