

# Introduction to Acids and Bases

1. Define acid and base using the Arrhenius and Brønsted-Lowry definitions.

	Arrhenius	Bronsted/Lowry
Acid		
Base		

2. Acids taste \_\_\_\_\_ and bases taste \_\_\_\_\_, bases also feel \_\_\_\_\_.

3. Acids turn litmus paper \_\_\_\_\_, bases turn litmus paper \_\_\_\_\_ and phenolphthalein \_\_\_\_\_.

4. Circle: Weak acids are strong / weak electrolytes. A weak electrolyte is a poor / good conductor of electricity.

5. Identify each of the following as an Arrhenius acid (A), Arrhenius base (B), or salt (S).

i. NaCl \_\_\_\_\_      ii. KOH \_\_\_\_\_      iii. HCl \_\_\_\_\_      iv. Mg(OH)<sub>2</sub> \_\_\_\_\_

v. MgCl<sub>2</sub> \_\_\_\_\_      vi. H<sub>2</sub>SO<sub>4</sub> \_\_\_\_\_

6. List uses of acids in the industry.

7. List examples of common acids and bases found in a home or store.

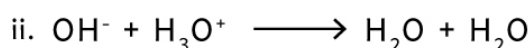
Acids:

Base:

8. Label the Bronsted-Lowry acid and base from the following reactions.



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# Introduction to Acids and Bases

## Answers

1. Define acid and base using the Arrhenius and Brønsted-Lowry definitions.

	Arrhenius	Bronsted/Lowry
Acid	A compound that dissociates in water to yield a hydrogen ion (H <sup>+</sup> )	A compound that can transfer a proton to another compound
Base	A compound that ionizes in water to yield hydroxide ions (OH <sup>-</sup> )	A compound that accepts a proton from another compound

2. Acids taste sour and bases taste bitter, bases also feel slippery.

3. Acids turn litmus paper red, bases turn litmus paper blue and phenolphthalein pink.

4. Circle: Weak acids are strong / weak electrolytes. A weak electrolyte is a poor / good conductor of electricity.

5. Identify each of the following as an Arrhenius acid (A), Arrhenius base (B), or salt (S).

i. NaCl S

ii. KOH B

iii. HCl A

iv. Mg(OH)<sub>2</sub> B

v. MgCl<sub>2</sub> S

vi. H<sub>2</sub>SO<sub>4</sub> A

6. List uses of acids in the industry.

- Cleaning concrete (HCl)
- Making paints, plastics, fertilizers, and producing batteries

7. List examples of common acids and bases found in a home or store.

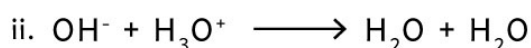
Acids: Lemon, vinegar, aspirin, orange juice, and lemonade

Base: Drain cleaner, soap, baking soda, window cleaner, tums, and antacids

8. Label the Bronsted-Lowry acid and base from the following reactions.



Acid Base      Base Acid



Acid Base      Base Acid