

Remember!

- REMEMBER...The Bronsted-Lowry Theory States
  - Bases accept H+ and acids donate H+
  - ullet A conjugate base is what remains after the acid gives up  $H^+$ .
  - A conjugate acid is what is formed when a base accepts a proton.

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 $\text{HClO}_{4(aq)} + \text{H}_2\text{O}_{(l)} \rightleftarrows \text{H}_3\text{O}^+_{(aq)} + \text{ClO}_4^-_{(aq)}$ 

 $HClO_4(aq) + H_2O(l) \rightleftarrows H_3O^+(aq) + ClO_4^-(aq)$ 

1. Which compound will donate a proton? \_\_\_\_\_

2. What does the compound look like after it donates a proton? \_\_\_\_

3. Which compound will accept a proton? \_\_\_\_\_

- . What does the compound look like after it accepts a proton? \_\_\_\_
- 5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

1

 $H_2SO_3(aq) + H_2O(l) \rightleftharpoons H_3O^+(aq) + HSO_3^-(aq)$ 

 $H_2SO_3(aq) + H_2O(l) \rightleftarrows H_3O^+(aq) + HSO_3^-(aq)$ 

1. Which compound will donate a proton? \_\_\_\_

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5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

6

 $HC_2H_3O_{2(aq)} + H_2O_{(l)} \rightleftarrows H_3O^+_{(aq)} + C_2H_3O_2^-_{(aq)}$ 

$HC_2H_3O_{2(aq)}$ -	$\vdash \mathrm{H_2O_{(l)}}  ightleftharpoons \mathrm{H_3O^+}$	$F_{(aq)} + C_2 H_3 O_2^{-}_{(aq)}$
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What does the compound look like after it donates a proton?

3. Which compound will accept a proton? \_\_\_\_\_

4. What does the compound look like after it accepts a proton?  $\_$ 

5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

 $H_2S(g) + H_2O(l) \rightleftarrows H_3O^+(aq) + HS^-(aq)$ 

 $H_2S(g) + H_2O(l) \rightleftharpoons H_3O^+(aq) + HS^-(aq)$ 

1. Which compound will donate a proton? \_\_\_\_\_

2. What does the compound look like after it donates a proton?

Which compound will accept a proton? \_\_\_\_\_

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5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

9

10

 $HF(aq) + HSO_3^-(aq) \rightleftharpoons F^-(aq) + H_2SO_3(aq)$ 

$HF(aq) + HSO_3^-(aq)$	$ angle  ightrightarrows F^-(aq)$	$+ H_2SO_3(aq)$
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5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

11

12

 $HNO_2(aq) + HS^-(aq) \rightleftharpoons NO_2^-(aq) + H_2S(aq)$ 

## $HNO_2(aq) + HS^-(aq) \rightleftharpoons NO_2^-(aq) + H_2S(aq)$

1. Which compound will donate a proton? \_\_\_\_\_

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2. What does the compound look like after it donates a proton?

3. Which compound will accept a proton? \_\_\_\_\_

4. What does the compound look like after it accepts a proton?

5. Identify the acid, base, conjugate acid and conjugate base below.

Acid	Conjugate Base	Base	Conjugate Acid

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