

Name \_\_\_\_\_  
Date Due \_\_\_\_\_  
Hand In With Corrections by \_\_\_\_\_

Chemistry 12  
Worksheet 4-2  
Bronsted Acids and Equilibria

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1. Write the formula for a **proton** (1 mark) \_\_\_\_\_
2. Write the formula for a **hydrated proton** (1 mark) \_\_\_\_\_
3. Write the formula for a **hydronium** ion (1 mark) \_\_\_\_\_
4. Give the **Arrhenius** definition of an **acid** (1 mark) \_\_\_\_\_  
\_\_\_\_\_
5. Give the **Arrhenius** definition of a **base** (1 mark) \_\_\_\_\_  
\_\_\_\_\_
6. Give the **Bronsted** definition of an **acid** (1 mark) \_\_\_\_\_  
\_\_\_\_\_
7. Give the **Bronsted** definition of a **base** (1 mark) \_\_\_\_\_  
\_\_\_\_\_
8. Given the equation:  $\text{HCO}_3^- + \text{H}_2\text{S} \rightleftharpoons \text{H}_2\text{CO}_3 + \text{HS}^-$ 
  - a) The **acid** on the left side is (1 mark) \_\_\_\_\_
  - b) The **base** on the left side is (1 mark) \_\_\_\_\_
  - c) The **acid** on the right side is (1 mark) \_\_\_\_\_
  - d) The **base** on the right side is (1 mark) \_\_\_\_\_

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