1. ♥ STUDY CHECK

Identify the following chemicals as Arrhenius acids or bases and give their names: NaOH and H_2CO_3 .

Show work:

Write just the final answer here:

2. ♥ STUDY CHECK

Indicate whether the following chemicals are lewis acid or lewis bases: (a) AlH_3 and (b) OH^- .

Show work:

Write just the final answer here:

3. ♥ STUDY CHECK

Identify the acid, the base, the conjugate acid and the conjugate base in the reaction:

$$CO_3^{2-}{}_{(aq)} + H_2O_{(l)} \Longrightarrow HCO_3^{-}{}_{(aq)} + H_3O_{(aq)}^{+}$$

/

Name:

Write just the final answer here:

4. ♥ STUDY CHECK

Identify the acid, the base, the conjugate acid and the conjugate base in the reaction:

Show work:

Write just the final answer here:

5. ♥ STUDY CHECK

Write down the following dissociation or acid-base reaction involving one proton: $HCl_{(g)} + NH_{3(g)} \longrightarrow$

Write just the final answer here:

6. ♥ STUDY CHECK

Indicate the strongest of the following acids:

$$H_2PH_4^-_{(aq)} + H_2O_{(l)} \Longrightarrow H_{(aq)}^+ + HPH_4^{2-}_{(aq)}$$
 $K_a = 6.2 \cdot 10^{-8}$
 $H_{(aq)}^+ + HCO_3^{2-}_{(aq)} \Longrightarrow H_2CO_{3(aq)} + H_2O_{(l)}$ $K_b = 2.3 \cdot 10^{-8}$

Show work:

Write just the final answer here:

7. ♥ STUDY CHECK

The hydroxyl concentration in a basic solution is $2.3 \cdot 10^{-6} M$. Calculate the concentration of protons.

Show work:

Write just the final answer here:

8. ♥ STUDY CHECK

Calculate the PH for: (a) an acid solution with proton concentration of $3.0 \cdot 10^{-8} M$ (b) a basic solution with a hydroxyl concentration of $2.0 \cdot 10^{-9} M$.

Show work:

Write just the final answer here:

9. ♥ STUDY CHECK

The PH of a solution is 9.5. Calculate the proton concentration of that solution.

Show work:

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Name:

Write just the final answer here: