

Acids and Bases Worksheet

1. Concentration of acids and bases on the pH scale:

- a) Base #1 has a pH of 9. Base #2 has a pH of 13. Which is more basic? How many more times basic is your choice?

$$13 - 9 = 4$$

Base # 2 is more basic; Base #2 is 10 000 times more basic than Base # 1

- b) Lemon juice has a pH of 2. Vinegar has a pH of 5. Which is more acidic? How many more times acidic is your choice?

$$5 - 2 = 3$$

Lemon juice is more acidic; Lemon juice is 1000 times more acidic than vinegar

2. What are the products of the following reactions? Write the balanced chemical equations for each reaction (these are synthesis reactions - look back in your notes)

- a) nitrogen dioxide plus water produces ...



- b) lithium oxide plus water produces ...



- c) magnesium oxide plus water produces ...

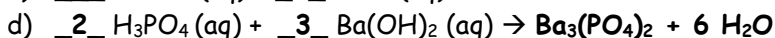
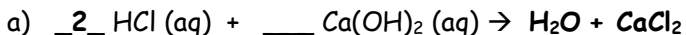


- d) carbon dioxide plus water produces ...



3. Neutralization of acids and bases:

Identify the products (water and salt) produced in each of the following neutralization reactions and balance the reaction.



4. You are required to make the salt CaSO₄ in the lab. Write the acid and the base needed to make the acid and write a balanced chemical equation showing the reaction.

