Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SPICY PRACTICE**

**Directions:** As you read the passages, please **take notes on** important information and **WRITE DOWN THE KEY IDEAS** about every paragraph. Then, answer the questions based on the information.

QUESTION 1:

Soil pH can affect the development of plants. For example, a hydrangea plant produces

blue flowers when grown in acidic soil but pink flowers when grown in basic soil. Evergreen plants can show a yellowing of foliage, called chlorosis, when grown in soil that is too basic.

Acidic soil can be neutralized by treating it with calcium hydroxide, Ca(OH)2, commonly

called slaked lime. Slaked lime is slightly soluble in water.

1. What is the overall point of this passage?
2. Write an equation, using symbols *or* words, for the neutralization of the ions in acidic soil by the ions released by slaked lime in water.

QUESTION 2:

In one trial of an investigation, 50.0 milliliters of HCl(aq) of an unknown concentration is titrated with 0.10 M NaOH(aq). During the titration, the total volume of NaOH(aq) added and the corresponding pH value of the reaction mixture are measured and recorded in the table below.



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1. What is the point of this passage?

2. Sketch a grid like the one to the right then, plot the data from the table. Circle and connect the points. [1]

3. Determine the total volume of NaOH(aq) added when the reaction mixture has a pH value of 7.0. [1]

4. Write a balanced equation that represents this neutralization reaction. [1]