**FPS – Solutions Notes and Practice**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

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| ***Bellwork*** |
|  | 1. What do you remember about the difference between homogeneous mixtures and heterogeneous mixtures?
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| ***Acids and Bases*** |
| ***The Chemistry of Acids and Bases*** – Label the following an “acid” or a “base”  http://www.mamabeesfreebies.com/wp-content/uploads/2016/03/windex.jpg  1. **What is an acid?**
	1. An \_\_\_\_\_\_\_\_\_\_\_\_\_ is a solution that has an excess of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. It comes from the Latin word *acidus* that means “sharp” or “sour”.
	2. The more H+ ions, the more ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the solution.
2. **Properties of an Acid**a. Tastes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. Conduct \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_d. Some acids react strongly with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to produce H2 (hydrogen gas)e. Turns blue litmus paper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_f. Neutralize with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_g. Strong acids fully \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water. Weak acids have fewer hydrogen ions in solution.1. http://www.mhhe.com/physsci/chemistry/chang7/esp/folder_structure/cr/m3/s3/assets/images/crm3s3_1.jpg**Uses of acids**
	1. Acetic acid = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acid (lemons, limes, oranges)
	3. Ascorbic Acid = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which your body needs.
	4. Sulfuric acid is used in production of fertilizer, steel, paint, and plastics.
2. ***What is a base?***
	1. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a solution that has excess \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Another word for base is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. ***Properties of a base***
	1. Feel \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Taste \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Can conduct \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with metals.
	6. Turn red litmus paper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. ***Uses of bases***
	1. Bases give \_\_\_\_\_\_\_\_\_\_\_\_\_\_, ammonia, and many other \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ some of their useful properties.
	2. The OH-­ions interact strongly with certain substances such as dirt and grease.
	3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and over cleaner are examples of bases.
	4. Your blood can be slightly \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ solution.
5. ***pH Scale***
	1. pH means “potential \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” – measure H+
	2. pH is a measure of how \_\_\_\_\_\_\_\_\_\_\_\_\_ or basic a solution is.
	3. The pH scale ranges from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	4. Acidic solutions have pH values \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	5. A solution with a pH of 0 is very acidic.
	6. A solution with a pH of 7 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
	7. \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has a pH of 7.

Basic solutions have pH values of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |



Acid‐base practice

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_

Circle the letter of the term or phrase that best completes each statement or answers each question.

1. Pure water has a pH of \_\_\_\_\_\_\_\_\_\_\_\_\_.

2. A substance that produces OH‐ ions in a solution is \_\_\_\_\_\_\_\_\_\_\_.

3. Identify each item below as to whether it refers to an acid, a base, or both an acid and a base. Use the letter in the key.

Key: A = acid; B = base; AB = acid and base

(a) \_\_\_\_\_ Produces hydrogen ions (H+) in solution.

(b) \_\_\_\_\_ Soaps are an example.

(c) \_\_\_\_\_ Can be detected with an indicator.

(d) \_\_\_\_\_ Lemon is an example.

(e) \_\_\_\_\_ Conducts electricity.

(f) \_\_\_\_\_ Is often corrosive.

(g) \_\_\_\_\_ reacts with metals.

4. Look at the list below of substances. Draw a pH scale in the space provided and arrange them to the best of your ability on it (you do ***not*** need to give **exact** pH values).

Sea water

Orange juice

Stomach acid

Human blood

Household bleach

Pure water

Tomato juice

Ammonia