(4)

Liquid	Color Change	pH	$[H_3O^+]$	$[OH^-]$
Hand Sanitizer	Green	12		OH^-
Lemon Soda	Pink	4	H_3O^+	—
Apple Juice	violet	6	H_3O^+	—
White Vinegar	Pink	3	H_3O^+	—
Shampoo	~~Pink~~ violet	5	H_3O^+	—
Conditioner	violet ~~Purple~~	7	—	—
Solids				
Baking Soda	Blue-Green	10		OH^-
Tums (or any antiacid)	violet	6	H_3O^+	—
Aspirin (or other pain killer)	Pink	3	H_3O^+	—
Powdered cleanser	Blue	9	—	OH^-
Powdered detergent	Green yellow	12	—	OH^-
Table Salt	violet ~~Purple~~	7		

(5)

Very Acidic	Acidic	Neutral	Basic	Very Basic
White Vinegar	Lemon Soda	Conditioner		Hand Sanitizer
Aspirin	Apple Juice	Baking Soda		Powdered detergent
	Shampoo	Powdered Cleanser		
	Tums	Table Salt		

6 Yes the color changes ~~to purple~~ because because baking soda neutralizes the solution.

Concept Questions

1. Not much (for weak acids / Bases)

It changes the the pH of strong acids by highering the pH and changes the pH of strong bases by lower the pH. Because baking soda neutralises them and trys to make them neutral.

2. increase in 1pH increases concentration of H^+ and decrease of H^+ decreases the pH unit.

pH B is stronger ~~acid~~ than pH A because the lower the pH value the stronger the Acid.

3. H^+ or OH^-

Real life Application

1. Because Alka-Seltzer is basic and since stomach aches are caused by excess acid, this Alka-seltzer helps to neutralize the acid and lowers the acidic level in the stomach.

2. is any form of precipitation with acidic components such as sulfuric or nitric acid that fall to the ground from the atmosphere in wet or dry forms.

* Acidic rain causes waters in water bodies acid thus affecting aquatic animal and aquatic plants by killing them due to it's acidic nature.