

# Properties of Acids and Bases

① Write acidic, basic, or neutral to indicate if a property of a solution is that of an acid, base, or neutral compound.

- a) Has a pH value greater than 7 \_\_\_\_\_
- b) Has pH value less than 7 \_\_\_\_\_
- c) Turns the color of litmus into blue \_\_\_\_\_
- d) Turns litmus paper from blue to red \_\_\_\_\_
- e) A solution with pH equal to 7 \_\_\_\_\_

② Indicate whether each of the following likely applies to acid, base, or neutral solutions.

Property	Acid, Base, or Neutral Solution
Disagreeable odors	
Slippery to touch	
Reacts with water to produce $\text{OH}^-$ ions	
$[\text{H}_3\text{O}^+] = [\text{OH}^-]$	
Corrodes metals	

③ Write the names of the following acids and bases.

- a) KOH \_\_\_\_\_
- b)  $\text{H}_2\text{Se}$  \_\_\_\_\_
- c)  $\text{CH}_3\text{COOH}$  \_\_\_\_\_
- d)  $\text{Fe}(\text{OH})_2$  \_\_\_\_\_
- e) HCN \_\_\_\_\_

④ Write the formulas for the following acids and bases.

- a) Ammonium hydroxide \_\_\_\_\_
- b) Cobalt (II) hydroxide \_\_\_\_\_
- c) Phosphoric acid \_\_\_\_\_
- d) Nitrous acid \_\_\_\_\_
- e) Ammonia \_\_\_\_\_

# Properties of Acids and Bases

## Answers

① Write acidic, basic, or neutral to indicate if a property of a solution is that of an acid, base, or neutral compound.

- a) Has a pH value greater than 7 Basic
- b) Has pH value less than 7 Acidic
- c) Turns the color of litmus into blue Basic
- d) Turns litmus paper from blue to red Acidic
- e) A solution with pH equal to 7 Neutral

② Indicate whether each of the following likely applies to acid, base, or neutral solutions.

Property	Acid, Base, or Neutral Solution
Disagreeable odors	Acid
Slippery to touch	Base
Reacts with water to produce $\text{OH}^-$ ions	Base
$[\text{H}_3\text{O}^+] = [\text{OH}^-]$	Neutral
Corrodes metals	Acid

③ Write the names of the following acids and bases.

- a) KOH potassium hydroxide
- b)  $\text{H}_2\text{Se}$  hydroselenic acid
- c)  $\text{CH}_3\text{COOH}$  acetic acid
- d)  $\text{Fe}(\text{OH})_2$  iron(II) hydroxide
- e) HCN hydrocyanic acid

④ Write the formulas for the following acids and bases.

- a) Ammonium hydroxide  $\text{NH}_4\text{OH}$
- b) Cobalt (II) hydroxide  $\text{Co}(\text{OH})_2$
- c) Phosphoric acid  $\text{H}_3\text{PO}_4$
- d) Nitrous acid  $\text{HNO}_2$
- e) Ammonia  $\text{NH}_3$