



1 Complete the table with ticks to show whether each of the following is an acid, base, salt and/or alkali.

formula	name	acid	base	alkali	salt
CaO					
K <sub>2</sub> SO <sub>4</sub>					
KOH					
HNO <sub>3</sub>					
NH <sub>3</sub>					
AlCl <sub>3</sub>					

2 A sample of hydrochloric acid with pH 2.3 has a concentration of H<sup>+</sup> ions of 0.0050 mol/dm<sup>3</sup>. Water was added to dilute the acid which reduced the concentration of H<sup>+</sup> ions to 0.00050 mol/dm<sup>3</sup>. What is the pH of the diluted acid?

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3 Ethanoic acid is a weak acid. Explain the terms *acid* and *weak*.

Acid = .....

.....

Weak = .....

.....

4 a Complete the word equation for each of the following reactions.

i sodium hydroxide + sulfuric acid → .....

ii copper carbonate + hydrochloric acid → .....

iii ammonia + nitric acid → .....

iv zinc + sulfuric acid → .....

b Write an ionic equation for reaction (i) .....

c Which of the reactions in (a) are redox reactions? .....

d Which of the reactions in (a) are acid-base reactions? .....

e Write balanced equations for the reactions in (a)

i .....

ii .....

iii .....

iv .....