Name _____ Block: _____ Date: _____

Chemistry 12

INTRO TO ACIDS & BASES

KEY

This worksheet is based on material on pages 109-114 in Hebden Chemistry 12.

1. What is the chemical name for muriatic acid? HCl
2. Which acid turns skin yellow on contact? nitric acid
3. Which acid is used in car batteries? sulphuric acid
4. Which acid is found in the human stomach? HCl
5. Which acid, in its concentrated form, will corrode copper? nitric acid
6. Concentrated sulphuric acid from the supplier is 98 % H_2SO_4 and 2 % H_2O. The molar concentration of this acid is 18 M.
7. Which acid turns skin white on contact? HCl
8. List the four common uses of nitric acid. ①prod. of nitrates ②fertilizers ③explosives ④dyes
9. When ammonia (NH_3) gas dissolves in water, it forms a compound called ammonium hydroxide (NH_4OH)
10. What is the chemical name for caustic potash? potassium hydroxide (KOH)
11. What is the chemical name for caustic soda or lye? NaOH
12. Which acid is a strong dehydrating agent? H_2SO_4
13. Concentrated hydrochloric acid from the supplier is 12 M or 37 % HCl.
14. Give five things that are manufactured with the help of sulphuric acid. fertilizers, explosives, dyes, insecticides, detergents, plastics

15. Which acid has a choking odour? HCl

16. What two common bases are used in the production of soaps? NaOH & KOH

17. Give the name of an alkaline gas which is highly soluble in water. NH_3 (ammonia)

18. Nitric acid from the supplier is 16 M or 69 % HNO_3.

19. Which acid is a non-electrolyte in its concentrated form? acetic acid (CH_3COOH)

20. Drain cleaner is made up of mainly NaOH

21. Name two compounds that absorb CO_2 from the air. NaOH, KOH

22. Which acid is used in the manufacture of textiles? acetic acid

23. HCl acid is used to remove "scale" from boilers.

24. Name an acid which produces a lot of heat when mixed with water. H_2SO_4

25. Name a base which produces a lot of heat when added to water. NaOH

26. KOH is used as an electrolyte in alkaline batteries.

27. Write balanced formula equations for the reactions which happen when the following are mixed:

a) sodium hydroxide and phosphoric acid

$3NaOH + H_3PO_4 \rightarrow Na_3PO_4 + 3H_2O$

b) sulphuric acid and aluminum hydroxide

$3H_2SO_4 + 2Al(OH)_3 \rightarrow Al_2(SO_4)_3 + 6H_2O$

c) $Fe(OH)_3 + HNO_3$

$Fe(OH)_3 + 3HNO_3 \rightarrow Fe(NO_3)_3 + 3H_2O$