

BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 57

1.
$$P_4O_{10} + _{---} H_2O = _{---} H_3PO_4$$

3.
$$C_3H_8 + ___ O_2 = 3 CO_2 + ___ H_2O$$

4.
$$Al_2O_3 + NaOH = NaAlO_2 + H_2O$$

5.
$$Ca_3P_2 + \underline{\hspace{1cm}} H_2O = \underline{\hspace{1cm}} Ca(OH)_2 + 2 PH_3$$

6. ____ HCl +
$$3 \text{ As}_2\text{O}_3$$
 + 4 NaNO_3 + $7 \text{ H}_2\text{O}$ = ____ NO + $6 \text{ H}_3\text{AsO}_4$ + 4 NaCl

7.
$$2 \text{ KMnO}_4 + \underline{\hspace{1cm}} H_2S + 6 \text{ HCl} = 5 \text{ S} + \underline{\hspace{1cm}} \text{MnCl}_2 + 2 \text{ KCl} + 8 \text{ H}_2O$$

8. ____ Na + 2
$$H_2O =$$
 ____ NaOH + H_2

9.
$$C_4(s)H_{10}(s) + 13 O_2(s) = CO_2(s) + 10 H_2(s)O$$

10.
$$PCl_5 + H_2O = H_3PO_4 + HCl$$

11.
$$Cr_2 + 3 O_2 = Cr_2O_3$$

13. ____
$$Fe_2O_3 + 3C =$$
___ $Fe + 3CO_2$

14.
$$C_5H_{12} + O_2 = 5 CO_2 + H_2O$$

15.
$$SO_2 + O_2 = SO_3$$

16.
$$Sb_2O_5 + Hg + 4 HNO_3 = Hg_2Sb_2O_7 + H_2O + 4 NO_2$$

18. 3 Mg + ____
$$H_3PO_4 = Mg_3(PO_4)_2 + ___ H_2$$

19.
$$Cr(s) + 3 O_2(g) = Cr_2O_3(s)$$

20.
$$Cu + O_2 = CuO$$

ANSWERS

1.
$$P_4O_{10} + 6 H_2O = 4 H_3PO_4$$

2.
$$2 \text{ FECl}_3 + \text{H}_2\text{S} = 2 \text{ FECl}_2 + \text{S} + 2 \text{ HCl}$$

3.
$$C_3H_8 + 5 O_2 = 3 CO_2 + 4 H_2O$$

4.
$$Al_2O_3 + 2 NaOH = 2 NaAlO_2 + H_2O$$

5.
$$Ca_3P_2 + 6 H_2O = 3 Ca(OH)_2 + 2 PH_3$$

6.
$$4 \text{ HCl} + 3 \text{ As}_2\text{O}_3 + 4 \text{ NaNO}_3 + 7 \text{ H}_2\text{O} = 4 \text{ NO} + 6 \text{ H}_3\text{AsO}_4 + 4 \text{ NaCl}$$

7.
$$2 \text{ KMnO}_4 + 5 \text{ H}_2\text{S} + 6 \text{ HCl} = 5 \text{ S} + 2 \text{ MnCl}_2 + 2 \text{ KCl} + 8 \text{ H}_2\text{O}$$

8.
$$2 \text{ Na} + 2 \text{ H}_2\text{O} = 2 \text{ NaOH} + \text{H}_2$$

9.
$$2 C_4(s)H_{10}(s) + 13 O_2(s) = 8 CO_2(s) + 10 H_2(s)O$$

10.
$$PCl_5 + 4 H_2O = H_3PO_4 + 5 HCl$$

11.
$$2 Cr_2 + 3 O_2 = 2 Cr_2O_3$$

12. 3
$$Mg(NO_3)_2 + 2 K_3PO_4 = Mg_3(PO_4)_2 + 6 KNO_3$$

13.
$$2 \text{ Fe}_2\text{O}_3 + 3 \text{ C} = 4 \text{ Fe} + 3 \text{ CO}_2$$

14.
$$C_5H_{12} + 8 O_2 = 5 CO_2 + 6 H_2O$$

15.
$$2 SO_2 + O_2 = 2 SO_3$$

16.
$$Sb_2O_5 + 2 Hg + 4 HNO_3 = Hg_2Sb_2O_7 + 2 H_2O + 4 NO_2$$

19.
$$4 \text{ Cr(s)} + 3 \text{ O}_2(g) = 2 \text{ Cr}_2\text{O}_3(s)$$

20.
$$2 \text{ Cu} + \text{O}_2 = 2 \text{ CuO}$$



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