Types of Chemical Reaction Worksheet CH. 7

Balance the reactions **a to e** and indicate which types of chemical reaction that are being represented:

a) NaBr + Ca(OH)₂
$$\rightarrow$$
 CaBr₂ + NaOH **Reaction Type**:

b) ____
$$NH_3+$$
 ____ $H_2SO_4 \rightarrow$ ____ $(NH_4)_2SO_4$ Reaction Type:

c) ____
$$C_5H_9O$$
 + ____ O_2 \rightarrow ____ CO_2 + ____ H_2O Reaction Type:

d) ____ Pb + ___
$$H_3PO_4 \rightarrow$$
 ____ H_2 + ___ $Pb_3(PO_4)_2$ Reaction Type:

e) ____ Li₃N + ___ NH₄NO₃
$$\rightarrow$$
 ___ LiNO₃ + ___ (NH₄)₃N Reaction Type:

Indicate the type of reactions for letters g through t.

g) Na₃PO₄ + 3 KOH \rightarrow 3 NaOH + K₃PO₄

Reaction Type _____

h) $MgCl_2 + Li_2CO_3 \rightarrow MgCO_3 + 2 LiCl$

Reaction Type _____

i) $C_6H_{12} + 9 O_2 \rightarrow 6 CO_2 + 6 H_2O$

Reaction Type _____

j) Pb + FeSO₄ \rightarrow PbSO₄ + Fe

Reaction Type _____

k) $CaCO_3 \rightarrow CaO + CO_2$

Reaction Type _____

I) $P_4 + 3 O_2 \rightarrow 2 P_2 O_3$

Reaction Type _____

m) $2 \text{ RbNO}_3 + \text{BeF}_2 \rightarrow \text{Be(NO}_3)_2 + 2 \text{ RbF}$

Reaction Type _____

n) $2 \text{ AgNO}_3 + \text{Cu} \rightarrow \text{Cu}(\text{NO}_3)_2 + 2 \text{ Ag}$

Reaction Type _____

o) $C_3H_6O + 4 O_2 \rightarrow 3 CO_2 + 3 H_2O$

Reaction Type _____

p) $2 C_5H_5 + Fe \rightarrow Fe(C_5H_5)_2$

Reaction Type _____

q) SeCl₆ + O₂ \rightarrow SeO₂ + 3Cl₂

Reaction Type _____

r) $2 \text{ Mgl}_2 + \text{Mn}(SO_3)_2 \rightarrow 2 \text{ MgSO}_3 + \text{MnI}_4$

Reaction Type _____

s) $O_3 \rightarrow O' + O_2$

Reaction Type _____

Six Types of Chemical Reaction Worksheet *Answers*

Balance the following reactions and indicate which of the six types of chemical reaction are being represented:

a) 2 NaBr + 1 Ca(OH)₂ \rightarrow 1 CaBr₂ + 2 NaOH

Type of reaction: double displacement

b) 2 NH₃+ 1 H₂SO₄ \rightarrow 1 (NH₄)₂SO₄

Type of reaction: synthesis

c) $4 C_5 H_9 O + 27 O_2 \rightarrow 20 CO_2 + 18 H_2 O$

Type of reaction: combustion

d) 3 Pb + 2 $H_3PO_4 \rightarrow 3 H_2 + 1 Pb_3(PO_4)_2$

Type of reaction: single displacement

e) $1 \text{ Li}_3\text{N} + 3 \text{ NH}_4\text{NO}_3 \rightarrow 3 \text{ LiNO}_3 + 1 (\text{NH}_4)_3\text{N}$

Type of reaction: double displacement

f) 3 HBr + 1 Al(OH)₃ \rightarrow 3 H-₂O + 1 AlBr₃

Type of reaction: acid-base

g) What's the main difference between a double displacement reaction and an acid-base reaction?

Acid-base reactions form water.

h) Complete combustion reactions always result in the formation of water.
What other types of chemical reaction may result in the formation of water?
Acid-base: HCl + NaOH → H₂O + NaCl