Word Equations

Write the word equations below as chemical equations and balance. Be sure to include states of matter.

	order states of matter.
1) lea	Zinc and aqueous lead (II) nitrate react to form aqueous zinc nitrate and
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2)	Aluminum bromide solution and chlorine gas react to form aqueous aluminum chloride and bromine gas.
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3)	Solutions of sodium phosphate and calcium chloride react. Solid calcium phosphate and aqueous sodium chloride are produced.
4)	Potassium metal and chlorine gas combine to form an ionic solid potassium chloride.
5)	Aluminum and hydrochloric acid solution react to form aluminum chloride solution and hydrogen gas.
6)	Aqueous calcium hydroxide and phosphoric acid react to form aqueous calcium phosphate and water.
7)	Copper metal and aqueous sulfuric acid react to form aqueous copper (II) sulfate, water, and sulfur dioxide gas.
8)	Hydrogen gas and nitrogen monoxide gas react to form water vapor and nitrogen gas.

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Word Equations - Answer Key

1) Zinc and lead (II) nitrate react to form zinc nitrate and lead.

$$Zn(s) + Pb(NO_3)_{2(aq)} \rightarrow Zn(NO_3)_{2(aq)} + Pb(s)$$

 Aluminum bromide and chlorine gas react to form aluminum chloride and bromine gas.

2 AlBr_{3(aq)} + 3 Cl_{2(g)}
$$\rightarrow$$
 2 AlCl₃(aq) + 3 Br_{2(g)}

 Sodium phosphate and calcium chloride react to form calcium phosphate and sodium chloride.

2 Na₃PO_{4(aq)} + 3 CaCl_{2(aq)}
$$\rightarrow$$
 6 NaCl(aq) + Ca₃(PO₄)_{2(s)}

4) Potassium metal and chlorine gas combine to form potassium chloride.

2 K(s) +
$$Cl_{2(g)} \rightarrow 2$$
 KCl(s)

 Aluminum and hydrochloric acid react to form aluminum chloride and hydrogen gas.

2 Al(s) + 6 HCl(aq)
$$\rightarrow$$
 3 H_{2(g)} + 2 AlCl_{3(aq)}

 Calcium hydroxide and phosphoric acid react to form calcium phosphate and water.

$$3 Ca(OH)_{2(aq)} + 2 H_3PO_{4(aq)} \rightarrow Ca_3(PO_4)_{2(aq)} + 6 H_2O(I)$$

7) Copper and sulfuric acid react to form copper (II) sulfate and water and sulfur dioxide.

$$Cu(s) + 2 H_2SO_{4(aq)} \rightarrow CuSO_{4(aq)} + 2 H_2O (I) + SO_{2(g)}$$

 Hydrogen gas and nitrogen monoxide react to form water and nitrogen gas.

$$2 H_{2(g)} + 2 NO \rightarrow 2 H_2O (g) + N_{2(g)}$$