

Predict and balance each reaction. Write the name of each salt produced.

1. sulfuric acid + potassium hydroxide $\text{H}_2\text{SO}_4 + 2 \text{KOH} \rightarrow 2 \text{HOH} + \text{K}_2\text{SO}_4$ potassium sulfate
2. phosphoric acid + sodium hydroxide $\text{H}_3\text{PO}_4 + \text{NaOH} \rightarrow 3 \text{HOH} + \text{Na}_3\text{PO}_4$ sodium phosphate
3. nitric acid + magnesium hydroxide $2 \text{HNO}_3 + \text{Mg(OH)}_2 \rightarrow 2 \text{HOH} + \text{Mg(NO}_3)_2$ magnesium nitrate
4. chloric acid + calcium hydroxide $2 \text{HClO}_3 + \text{Ca(OH)}_2 \rightarrow 2 \text{HOH} + \text{Ca(ClO}_3)_2$ calcium chlorate
5. hydrochloric acid + lithium hydroxide $\text{HCl} + \text{LiOH} \rightarrow \text{HOH} + \text{LiCl}$ lithium chloride
6. carbonic acid + barium hydroxide $\text{H}_2\text{CO}_3 + \text{Ba(OH)}_2 \rightarrow 2 \text{HOH} + \text{BaCO}_3$ barium carbonate
7. phosphorous acid + ammonium hydroxide $\text{H}_3\text{PO}_3 + 3 \text{NH}_4\text{OH} \rightarrow 3 \text{HOH} + (\text{NH}_4)_3\text{PO}_3$ ammonium phosphite
8. sulfurous acid + potassium hydroxide $\text{H}_2\text{SO}_3 + \text{KOH} \rightarrow 2 \text{HOH} + \text{K}_2\text{SO}_3$ potassium sulfite
9. perchloric acid + iron (III) hydroxide $3 \text{HClO}_4 + \text{Fe(OH)}_3 \rightarrow 3 \text{HOH} + \text{Fe(ClO}_4)_3$ iron (III) perchlorate
10. acetic acid + aluminum hydroxide $3 \text{HC}_2\text{H}_3\text{O}_2 + \text{Al(OH)}_3 \rightarrow 3 \text{HOH} + \text{Al(C}_2\text{H}_3\text{O}_2)_3$ aluminum acetate

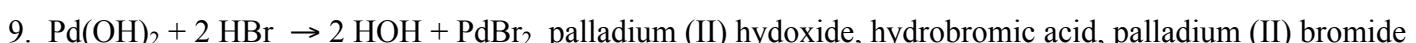
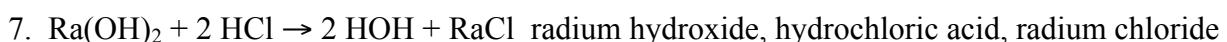
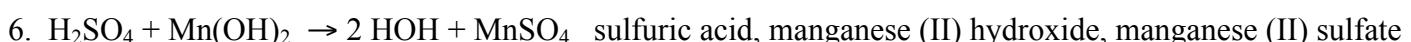
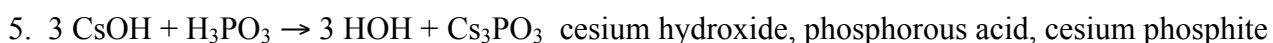
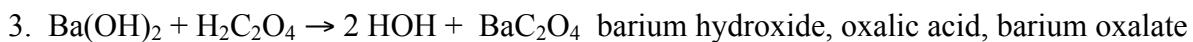
Predict and balance each reaction. Write the name of each acid, base and salt.

1. $\text{HBr} + \text{LiOH} \rightarrow \text{HOH} + \text{LiBr}$ hydrobromic acid, lithium hydroxide, lithium bromide
2. $2 \text{HClO}_2 + \text{Ca}(\text{OH})_2 \rightarrow 2 \text{HOH} + \text{Ca}(\text{ClO}_2)_2$ chlorous acid, calcium hydroxide, calcium chlorite
3. $\text{H}_2\text{SO}_4 + 2 \text{NH}_4\text{OH} \rightarrow 2\text{HOH} + (\text{NH}_4)_2\text{SO}_4$ sulfuric acid, ammonium hydroxide, ammonium sulfate
4. $\text{H}_3\text{PO}_4 + 3 \text{NaOH} \rightarrow 3 \text{HOH} + \text{Na}_3\text{PO}_4$ phosphoric acid, sodium hydroxide, sodium phosphate
5. $3 \text{H}_2\text{CO}_3 + 2 \text{Al}(\text{OH})_3 \rightarrow 6 \text{HOH} + \text{Al}_2(\text{CO}_3)_3$ carbonic acid, aluminum hydroxide,
aluminum carbonate
6. $\text{HCl} + \text{KOH} \rightarrow \text{HOH} + \text{KCl}$ hydrochloric acid, potassium hydroxide, potassium chloride
7. $3 \text{HNO}_3 + \text{Fe}(\text{OH})_3 \rightarrow 3 \text{HOH} + \text{Fe}(\text{NO}_3)_3$ nitric acid, iron (III) hydroxide, iron (III) nitrate
8. $2 \text{HI} + \text{Ca}(\text{OH})_2 \rightarrow 2 \text{HOH} + \text{CaI}_2$ hydroiodic acid, calcium hydroxide, calcium iodide
9. $\text{HBr} + \text{NH}_4\text{OH} \rightarrow \text{HOH} + \text{NH}_4\text{Br}$ hydrobromic acid, ammonium hydroxide, ammonium bromide
10. $2 \text{HF} + \text{Mg}(\text{OH})_2 \rightarrow 2 \text{HOH} + \text{MgF}_2$ hydrofluoric acid, magnesium hydroxide, magnesium fluoride

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1. calcium hydroxide + acetic acid $\text{Ca}(\text{OH})_2 + 2 \text{HC}_2\text{H}_3\text{O}_2 \rightarrow 2 \text{HOH} + \text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$ calcium acetate
2. carbonic acid + magnesium hydroxide $\text{H}_2\text{CO}_3 + \text{Mg}(\text{OH})_2 \rightarrow 2 \text{HOH} + \text{MgCO}_3$ magnesium carbonate
3. sodium hydroxide + perchloric acid $\text{NaOH} + \text{HClO}_4 \rightarrow \text{HOH} + \text{NaClO}_4$ sodium perchlorate
4. chloric acid + lithium hydroxide $\text{HClO}_3 + \text{LiOH} \rightarrow \text{HOH} + \text{LiClO}_3$ lithium chlorate
5. potassium hydroxide + hypochlorous acid $\text{KOH} + \text{HClO} \rightarrow \text{HOH} + \text{KClO}$ potassium hypochlorite
6. chlorous acid + strontium hydroxide $2 \text{HClO}_2 + \text{Sr}(\text{OH})_2 \rightarrow \text{Sr}(\text{ClO}_2)_2 + 2 \text{HOH}$ strontium chlorite
7. aluminum hydroxide + hydrobromic acid $\text{Al}(\text{OH})_3 + 3 \text{HBr} \rightarrow 3 \text{HOH} + \text{AlBr}_3$ aluminum bromide
8. hydrofluoric acid + iron (III) hydroxide $3 \text{HF} + \text{Fe}(\text{OH})_3 \rightarrow 3 \text{HOH} + \text{FeF}_3$ iron (III) fluoride
9. iron (II) hydroxide + hydroiodic acid $\text{Fe}(\text{OH})_2 + 2 \text{HI} \rightarrow 2 \text{HOH} + \text{FeI}_2$ iron (II) iodide
10. iodic acid + copper (II) hydroxide $\text{HIO}_3 + \text{Cu}(\text{OH})_2 \rightarrow 2 \text{HOH} + \text{Cu}(\text{IO}_3)_2$ copper (II) iodate

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palladium (IV) acetate