$\qquad$
13. Complete and balance these combination reactions.
a) $\qquad$ $\mathrm{Be}+$ $\qquad$ $\mathrm{O}_{2} \rightarrow$
b) $\qquad$ $\mathrm{SO}_{2}+$ $\qquad$ $\mathrm{H}_{2} \mathrm{O} \rightarrow$ $\qquad$ $\mathrm{H}_{2} \mathrm{SO}_{3}$
14. Write and balance an equation for the formation of each compound from its elements.
a) strontium iodide $\left(\mathrm{Srl}_{2}\right)$
b) magnesium nitride $\left(\mathrm{Mg}_{3} \mathrm{~N}_{2}\right)$
15. Complete and balance these decomposition reactions.
a) $\qquad$ $\mathrm{HI} \rightarrow$
b) $\qquad$ $\mathrm{Mg}\left(\mathrm{ClO}_{3}\right)_{2} \rightarrow$ $\qquad$ $\mathrm{MgCl}_{2}+$ $\qquad$
16. Write the formula for the binary compound that decomposes to each set of products.
a) $\mathrm{H}_{2}+\mathrm{Br}_{2}$
b) $\mathrm{Na}+\mathrm{Cl}_{2}$
17. Complete the equations for these single-replacement reactions that take place in aqueous solution. Balance each equation. If a reaction does not occur write "no reaction."
a) $\qquad$ $\mathrm{Fe}(\mathrm{s})+$ $\qquad$ $\mathrm{Pb}\left(\mathrm{NO}_{3}\right)_{2}(\mathrm{aq}) \rightarrow$
b) $\qquad$ $\mathrm{Cl}_{2}(\mathrm{~g})+$ $\qquad$ $\mathrm{NaI}(\mathrm{aq}) \rightarrow$
c) $\qquad$ $\mathrm{Ca}(\mathrm{s})+$ $\qquad$ $\mathrm{H}_{2} \mathrm{O}(\mathrm{I}) \rightarrow$
18. Write the products for thedse double-replacement reactions. Then balance each equations.
a) $\qquad$ $\mathrm{NaOH}+$ $\qquad$ $\mathrm{Fe}\left(\mathrm{NO}_{3}\right)_{3} \rightarrow$
b) $\qquad$ $\mathrm{Ba}\left(\mathrm{NO}_{3}\right)_{2}+$ $\qquad$ $\mathrm{H}_{3} \mathrm{PO}_{4} \rightarrow$
19. Write a balanced equation for each reaction.
a) $\qquad$ $\mathrm{KOH}(\mathrm{aq})+$ $\qquad$ $\mathrm{H}_{3} \mathrm{PO}_{4}(\mathrm{aq}) \rightarrow$
b) $\qquad$ $\mathrm{H}_{2} \mathrm{SO}_{4}+$ $\qquad$ $\mathrm{Al}(\mathrm{OH})_{3} \rightarrow$
20. Write a balanced equation for the complete combustion of each compound.
a) HCOOH
b) $\mathrm{C}_{7} \mathrm{H}_{16}$
21. Write a balanced equation for the complete combustion of glucose $\left(\mathrm{C}_{6} \mathrm{H}_{12} \mathrm{O}_{6}\right)$.

