

## ♦ Using Science Skills

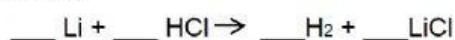
| Compound name     | Formula          |
|-------------------|------------------|
| hydrochloric acid | HCl              |
| hydrogen iodide   | HI               |
| lithium chloride  | LiCl             |
| water             | H <sub>2</sub> O |

**26. Applying Concepts** Write and balance the following chemical reactions.

- a. Hydrogen (H<sub>2</sub>) reacts with iodine (I<sub>2</sub>) to form hydrogen iodide.



- b. Lithium (Li) and hydrochloric acid react to produce hydrogen (H<sub>2</sub>) and lithium chloride.



- c. When you run an electrical current through water, you get hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>).



**27.** Classify as decomposition, synthesis, single replacement, or double replacement

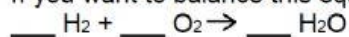
- 28.** When baking soda and vinegar are combined, gas bubbles form, the vinegar smell disappears, and the mixture gets colder. Has a chemical or physical change taken place? How do you know?

This (is is not) a chemical change because (a no) new substance was produced.

If the was a reaction was it endothermic or exothermic

- 29.** When balancing a chemical equation, why can you change the coefficients but not the subscripts?

If you want to balance this equation:



Why is this not correct?

