**1** Acids also produce salts when they react:

 Sulfuric acid always produces sulfates.

 Hydrochloric acid always produces chlorides.

 Nitric acid always produces nitrates.

 Ethanoic acid always produces ethanoates.

Complete the table below.

|  |  |  |  |
| --- | --- | --- | --- |
| Acid | Other reactant | Salt produced | Other product(s) |
| hydrochloric acid | magnesium | *magnesium chloride* | *hydrogen* |
| nitric acid | copper carbonate | *copper nitrate* | *carbon dioxide* + *water* |
| sulfuric acid | magnesium | *magnesium sulfate* | *hydrogen* |
| sulfuric acid | iron | *iron(ii) sulfate* | *hydrogen* |
| *hydrochloric acid* | zinc | zinc chloride | *hydrogen* |
| *sulfuric acid* | sodium carbonate | sodium sulfate | *carbon dioxide* + *water* |
| hydrochloric acid | calcium hydroxide | *calcium chloride* | *Water* |
| ethanoic acid | *sodium hydroxide* | sodium ethanoate | Water |
| nitric acid | ammonia solution | *ammonium nitrate* | *Water* |

**2** Complete the table of solubility. TICK the second row if all is soluble or STATE the exemptions if NOT all are soluble (give at least one example).

|  |  |  |
| --- | --- | --- |
| **Salts** | **Soluble** | **Insoluble** |
| Sodium salts | TICK |  |
| Carbonates | Sodium, potasssium, and ammonium carbonates |  |
| Ammonium salts | TICK |  |
| Sulfates |  | Barium sulfate, lead(II) sulfate, calcium sulfate |
| Ethanoates | TICK |  |
| Chlorides |  | Silver chloride, lead(II) chloride |
| Nitrates | TICK |  |
| Potassium salts | TICK |  |