• A _______________  reaction is the reaction between an _______________ and a _______________ to produce a _______________ plus _______________.
• A _______________ is any compound containing the _______________ from a base and the _______________ from an acid.

Write the neutralization reaction when $H_2SO_4$ reacts with KOH. Label the acid, the base, and the salt.

$$H_2SO_4 + KOH \rightarrow$$

Write the neutralization reaction when ________________ acid reacts with ________________ hydroxide.

• A _______________ is a laboratory method used to determine the _______________ of an acid or base in _______________ by performing a _______________ reaction with a _______________ solution.
• In a _______________ solution, the _______________ of _______________ ions must equal the _______________ of _______________ ions.

\[
\text{moles } A \frac{\text{mol}}{M_A} \frac{\text{mol}}{V_A} = \text{moles } B \frac{\text{mol}}{M_B} \frac{\text{mol}}{V_B}
\]
Example Titration Problem:

Find the molarity of this sample of hydrochloric acid (HCl) by neutralizing it with 0.5 M sodium hydroxide (NaOH).

<table>
<thead>
<tr>
<th>Volume of HCl</th>
<th>Volume of NaOH</th>
</tr>
</thead>
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- The ________________ of a titration is the point at which the indicator changes ________________ indicating that ________________ has been reached so the ________________ of ______________ ions and the ________________ of ______________ ions are ________________.

\[
\frac{\text{moles } H^+}{1 \text{ mole}_A} (M_A)(V_A) = \frac{\text{moles } OH^-}{1 \text{ mole}_B} (M_B)(V_B)
\]

In a titration of ________________ with ________________, ________________mL of the base were required to neutralize 10.0 mL of a ________________M ________________. What is the molarity of the KOH?

60.0 mL of ________________ molar ________________ were needed to neutralize 30.0 mL of ________________. What is the molarity of the acid?

The Chemistry Quiz

CR1.______ CR2.______

1.______ 2.______ 3.______ 4.______ 5.______