

**Table 6.1**

Symbolic and Verbal Representations of the Null and Research Hypotheses for the  $z$  for a Sample Mean

| <i>Hypothesis Type</i> | <i>Symbolic</i>             | <i>Verbal</i>   | <i>Difference Between Sample and Population Means Was Created by</i> |
|------------------------|-----------------------------|---|--|
| Research hypothesis    | $\mu_{\text{quiz}} > 75$    | The population of people who take frequent quizzes <i>will</i> have quiz scores higher than 75.     | The treatment improving final exam scores                            |
| Null hypothesis        | $\mu_{\text{quiz}} \leq 75$ | The population of people who take frequent quizzes <i>will not</i> have quiz scores higher than 75. | Sampling error   |