**On Time?**

A report on on-time arrivals of airlines provides a number of pieces of information about each flight. For each of these variables, indicate if it is quantitative (Q) or categorical (C).

The name of the airline. \( Q \ C \) How late (or early) the flight was. \( Q \ C \)

The flight number \( Q \ C \) The length of the flight. \( Q \ C \)

Whether or not the flight departed on time. \( Q \ C \) The destination airport. \( Q \ C \)

**Ball Bearings**

A company manufactures ball bearings that should measure between 9.99 and 10.01 millimeters in diameter. To ensure high quality, bearings are sampled, and the diameter of each is recorded.

In the italicized statement above: Circle only the description of the units of observation (not the “units of measurement” = millimeters) in this study; underline only a description of the variable in this study. Is this variable quantitative or categorical?

**Downtime**

An industrial plant monitors its productivity; and monitors the daily amount of downtime at the plant.

Units of observation: ___________________ Variable: ___________________

(each is amply described with one single word)

**Sizes of Trees**

You’ve been hired to work for a paper company that harvests trees grown in a large forest. Statistical methods are used to assess the size of trees. One finding is that the diameter at breast height (dbh, in inches) of trees in the forest has mean 8.8 and standard deviation 2.8. (Using a regression analysis, one can estimate the volume of wood in a tree from the dbh; volume is critical to paper making, but volume cannot be obtained without cutting the tree. By using dbh one can determine with reasonable accuracy the total volume of wood in the forest without cutting down a single tree.)

Tell someone who knows nothing about standard deviation something about the data set consisting of the dbhs for a large collection of trees.

About _____ % of trees have diameter between _______ and _______.

About _____ % of trees have diameter between _______ and _______.

**Salaries**

Most 2009 graduates of SUNY Oswego’s accounting program earn between $40,000 and $60,000 in their first year of employment. If you gathered first year salary data on each of these former students, what would you expect for the value of the standard deviation?

\[ S \ D \approx \underline{\text{__________}} \]