

In descending order of precision, the four different levels of measurement are:

- **Nominal**—Latin for name only (Milk, Lemonade, Orange, Goat)
- **Ordinal**—Think ordered levels or ranks (small—8oz, medium—12oz, large—32oz)
- **Interval**—Equal intervals among levels (1 euro to 2 euros is the same interval as 88 euros to 89 euros)
- **Ratio**—Let the “o” in ratio remind you of a zero in the scale (Day 0, day 1, day 2, day 3, ...)

The first level of measurement is **nominal level of measurement**. In this level of measurement, the numbers in the variable are used only to classify the data. In this level of measurement, words, letters, and alpha-numeric symbols can be used. Suppose there are data about people belonging to three different gender categories. In this case, the person belonging to the female gender could be classified as F, the person belonging to the male gender could be classified as M, and transgendered classified as T. This type of assigning classification is nominal level of measurement.

The second level of measurement is the **ordinal level of measurement**. This level of measurement depicts some ordered relationship among the variable's observations. Suppose a student scores the highest grade of 100 in the class. In this case, he would be assigned the first rank. Then, another classmate scores the second highest grade of an 92; she would be assigned the second rank. A third student scores a 81 and he would be assigned the third rank, and so on. The ordinal level of measurement indicates an ordering of the measurements.

The third level of measurement is the **interval level of measurement**. The interval level of measurement not only classifies and orders the measurements, but it also specifies that the distances between each interval on the scale are equivalent along the scale from low interval to high interval. For example, an interval level of measurement could be the measurement of anxiety in a student between the score of 10 and 11, this interval is the same as that of a student who scores between 40 and 41. A popular example of this level of measurement is temperature in centigrade, where, for example, the distance between 94°C and 96°C is the same as the distance between 100°C and 102°C .

The fourth level of measurement is the **ratio level of measurement**. In this level of measurement, the observations, in addition to having equal intervals, can have a value of zero as well. The zero in the scale makes this type of measurement unlike the other types of measurement, although the properties are similar to that of the interval level of measurement. In the ratio level of

measurement, the divisions between the points on the scale have an equivalent distance between them.

The researcher should note that among these levels of measurement, the nominal level is simply used to classify data, whereas the levels of measurement described by the interval level and the ratio level are much more exact.