



# Product Domain Glossary

Category	A collection of graded assessments of the same type. For example, “Homeworks” is a category in many courses. Another example of a category is a “Quiz”. The grades on the assessments in a category are often used to calculate a summary grade for that category.
Course Grade	The numeric grade for an entire course. A course grade is often calculated by weighting the summary grades for the categories.
Dropped	A grade is said to be dropped when it is not included in subsequent calculations. For example, it is not uncommon to assign 11 homework assignments and then drop the one with the lowest grade.
Grade	A labeled numeric score on an assessment mechanism (e.g., an exam) or group of assessment mechanisms (e.g., the homework assignments for the semester). The label is referred to as the key and the numeric score is referred to as the value.
Missing Grade	A grade that does not have a numeric score.
Unspecified Weight	A weight is said to be unspecified for a particular grade when there is no weight that corresponds to that grade’s label/key.
Weight	A number that will be multiplied by the numeric score of a grade. Weights are identified using the label/key of the grade.
Weighted Average	The weighted average of a collection of grades is defined as:

$$a = \frac{\sum_{i=0}^{N-1} w_i g_i}{\sum_{i=0}^{N-1} w_i}$$

where  $g_i$  denotes the value of grade  $i$  (properly accounting for missing values) and  $w_i$  denotes the non-negative weight associated with grade  $i$  (properly accounting for unspecified weights).

## Weighted Total

The weighted total of a collection of grades is defined as:

$$t = \sum_{i=0}^{N-1} w_i g_i$$

where  $g_i$  denotes the value of grade  $i$  (properly accounting for missing values) and  $w_i$  denotes the non-negative weight associated with grade  $i$  (properly accounting for unspecified weights). Note that the weighted total and weighted average are identical if the weights are non-negative and sum to 1.