

Product Domain Glossary

4-Point Scale	A numeric grading system in which valid grades are in the range 0 to 4. Typically, the valid grades in this scale are 0.0, 0.3, 0.7, 1.0, 1.3, 1.7, 2.0, 2.3, 2.7, 3.0, 3.3, 3.7, and 4.0.
Attempted Hours	The attempted hours for a single course is just the number of credits for that course. The total attempted hours for a student is the total number of credits attempted in all of a student's courses. See also "Earned Hours".
Average	The arithmetic mean of a collection of numbers. That is, letting v_1, v_2, \dots, v_n denote n numbers, the average is defined as $\sum_i v_i / n$. For example, the average of the numbers 8.0, 7.0, and 8.5 is $(8.0 + 7.0 + 8.5) / 3 = 23.5/3 = 7.833$.
Credits	The number of idealized weekly meeting hours for a course. This might include lecture hours, lab hours, discussion hours, etc. At some universities, it also includes the number of hours the student is expected to work on their own, but this is rare.
Earned Hours	The earned hours for a single course is either 0 (if the student did not pass the course) or the number of credits for that course (if the student passed the course). The total earned hours for a student is the total number of credits in all courses that a student passed (i.e., received a passing grade).
Empty	A collection is said to be empty if it does not contain any elements.
Filter	A process that removes numbers from a collection of numbers. For example, one might filter a collection of grades to get only the passing grades.
Grade	A measure of a student's understanding of the material in a course. See also "Letter Grade" and "Numeric Grade".
Grade Point Average	The grade point average (GPA) for a student is their total quality points divided by their total attempted hours. See also "Weighted Average".
Ignored	When a value is ignored it does not enter into the calculation in any way. For example, if missing values are ignored then the total of the numbers 8.0, Missing, and 7.0 is $(8.0 + 7.0) = 15.0$ and the average is $15.0 / 2 = 7.5$.

Invalid Weight	A weight that does not have an appropriate numeric value. Invalid weights may be handled differently in different situations. For example, they may be ignored or they may be treated as 1.
Labeled Number	A numeric value along with an associated textual label that is used as an identifier.
Letter Grade	A non-numeric grade. The valid letter grades are typically A, A-, B+, B, B-, C+, C, C-, D+, D, D-, and F.
Missing Value	A “pseudo value” that indicates that there is no actual value. For example, if a student doesn’t have a grade in a course that grade would be considered missing. Missing values may be handled differently in different situations. For example, they may be ignored or they may be treated as 0.
Numeric Grade	A cardinal grade. Numeric grades most commonly range between 0 and 100 or 0 and 4. Typically, only some cardinal values in the range are valid numeric grades.
Passing Grade	A grade that results in a student being given credits for a course. For example, when using letter grades, D- and above are often considered passing. As another example, when using numeric grades on a 100 point scale, 60 and above are often considered passing.
Quality Points	The quality points for a single course is the product of the numeric grade in the course and the number of credits for that course. The total quality points for a student is the sum of the quality points for each course. See also “Weighted Total”.
Total	The sum of a collection of numbers. That is, letting v_1, v_2, \dots, v_n denote n numbers, the average is defined as $\sum_i v_i$. For example, the total of the numbers 8.0, 7.0, and 8.5 is $(8.0 + 7.0 + 8.5) = 23.5$.
Unspecified Weight	A weight is said to be unspecified for a particular label when there is no weight that corresponds to that label.
Weight	A number that will be multiplied by another number. For example, when calculating quality points, each course has an associated number of credits and the grade in the course is multiplied by the number of credits to get the quality points.
Weighted Average	Letting v_1, v_2, \dots, v_n denote n numbers and w_1, w_2, \dots, w_n denote corresponding weights, the weighted average is defined as $\sum_i (w_i v_i) / \sum_i w_i$. If the denominator is 0, then the weighted average is missing.
Weighted Total	Letting v_1, v_2, \dots, v_n denote n numbers and w_1, w_2, \dots, w_n denote corresponding weights, the weighted total is defined as $\sum_i w_i v_i$.