

Answers to Exercise 6.1

Converting Scores

1. *Explain why it is legitimate to compute an average across summative scores for different learning goals but it is not legitimate to compute an average across formative scores within a given learning goal.*

It is not appropriate to compute an average across formative scores within a learning goal because the average does not take into account the fact that a student's scores will increase as he or she learns more about the goal. Averaging the scores within a learning goal would punish the student for low scores in the beginning of a grading period and would not be representative of his or her level of knowledge or skill at the end of the grading period. However, calculating an average for summative scores across learning goals is permissible because each learning goal has a unique focus. An average is a viable indicator of a student's overall "tendency" (central tendency) across a series of independent learning goals.

- 2A. *Using the conversion scale in table 6.1 (page 106), compute the letter grade for the student.*

Average score: 2.57

Grade: B-

- 2B. *Using the conversion scale in table 6.2 (page 109), translate the student's scores into one of the following categories: advanced, proficient, basic, or below basic.*

An average score of 2.57 translates into the proficient category.

- 2C. *Using the conversion scale in table 6.3 (page 110), translate the student's scores into an average percentage score.*

The average of 80% (2.5), 80% (2.5), 90% (3.0), 90% (3.0), 80% (2.5), 70% (2.0), and 80% (2.5) is 81.4%.

3. *For the seven summative scores used in question 2, assume that during the grading period, the teacher has addressed only score 2.0 content for goals 6 and 7 and just started score 3.0 content for goals 4 and 5. Devise a conjunctive approach that would take this into consideration, and compute a letter grade using the following matrix:*

	Minimum Score for A	Minimum Score for B	Minimum Score for C	Minimum Score for D	Score for F
Goal 1	3.0	2.5	2.0	1.0	0.5 or below
Goal 2	3.0	2.5	2.0	1.0	0.5 or below
Goal 3	3.0	2.5	2.0	1.0	0.5 or below
Goal 4	2.5	2.0	1.5	0.5	0.0
Goal 5	2.5	2.0	1.5	0.5	0.0
Goal 6	2.0	1.5	1.5	0.5	0.0
Goal 7	2.0	1.5	1.0	0.5	0.0

In this scenario, the teacher addressed score 2.0 content only for goals 6 and 7 during the grading period. Additionally, during the grading period, the teacher just began instruction in the score 3.0 content for goals 4 and 5. Therefore, it makes sense that the cut point or cut scores for a grade of an A would begin at 2.0 for goals 6 and 7 and at 2.5 for goals 4 and 5. This is reflected in the first column of the preceding matrix. The cut score for grades of B, C, D, and F is adjusted proportionally. The sample student received scores of 2.5, 2.5, 3.0, 3.0, 2.5, 2.0, and 2.5. For his or her first score of 2.5, the student does not meet the cut score for an A but does meet the cut score for a B; for the second score, he or she, again, meets the cut score for a B but not for an A. Comparing the student's obtained scores with the cut scores in the matrix, the student would receive a grade of B.

A major disadvantage of the conjunctive approach is that a single low score can dramatically change a student's grade. To illustrate, assume that the student's score on learning goal 1 was 2.0 instead of 2.5. As shown in the matrix, this low score would have dropped the student to a grade of C.