

Algorithm to self-grade, following the criteria given in the syllabus:

The syllabus for this class represents a shift away from using tests as the sole factor in determining grades. Grades in this classroom will be derived from performance in the four (4) areas given below. Tests and quizzes still, like ever, examine student progress with the many symbolic skills and mathematical techniques of intermediate algebra; these will make up only about one-half ($\frac{1}{2}$) of your grade in this course.

In the mode of instruction most popular for the past 50 years in college mathematics, grades were determined exclusively by timed, pencil and paper tests of accuracy on skills and technique. A more authentic assessment of student achievement is a tad more complex than this traditional grading, though is worth the extra effort. Your portfolio contains much of the information needed to compute your grade.

Authentic assessment includes the traditional mode (timed, written tests) as a leading indicator of student achievement, yet goes further to include assessment on three other aspects of mathematical problem solving. Thus this class's assessments include: communication and organization skills (especially important in commercial, computer and work-place problem-solving situations), as well as a recognition of professional growth and individual achievement, and an accommodation for the diverse (degree) goals, skill-levels and problem-solving backgrounds that appear in a typical classroom.

The grade in this course is determined by an algorithm composed of four parts; each of these four parts must be dealt with individually.

For each of these four parts, there are two numbers that need to be tabulated in order to compute your base-line grade:

- 1) the number of points you earned for each part, and
- 2) the number of points possible for each.

The four parts, as labeled in your syllabus, are:

- 1) Preparation/Participation,
- 2) Quiz and Test scores,
- 3) Journal, and
- 4) Portfolio.

These four parts are put together in a “weighted average” to get the desired approximation to your grade as it currently stands. I have used variables freely in this description, to keep track of the various numbers encountered in this process, and to be able to identify and retrieve the important numbers later.

Here is a way which your bottom-line, objective, performance-based grade can be determined at any time during the semester. Answer the questions and do the computations as encountered, much of this information can be found in the logs in your portfolio.

Part 1: Preparation and participation

The syllabus suggests that students can earn an average of about 5 points for each class meeting. This is done through attendance (1 pt. per day), through demonstrating that you did the reading and attempted the assigned problem set for the day (worth about 2 pts. per day) and through actively contributing to classroom work and discussions (worth about 2 pts. per day).

10. How many days have you attended class? $a = \underline{\hspace{2cm}}$

It may be easiest to determine this number by asking yourself two related questions:

11. How many class sessions have I missed? $b = \underline{\hspace{2cm}}$ and

12. How many times has class met? $c = \underline{\hspace{2cm}}$

(You can check any calendar to count the number of Monday, Wednesday, and Fridays have occurred since the term began. Do not add-in any which were holidays.)

Then the answer to 1. can be computed from the answers to 11. and 12., so $a = c - b$.

13. (Approximately) Out of every four times you have been called on to answer questions in class, how many times on average did you have a prepared answer to respond with?

Let $d = \underline{\hspace{2cm}}$ average number of prepared responses out of each four opportunities.

(For this particular question, it matters not whether your answer was correct, only that it was done/attempted prior to class. If your response was a question about a particular aspect of the question posed, then you should consider that question to be a valid "prepared answer" for the purpose of this portion of the grade. Such pointed questions are, in fact, often more valuable to the class than a curt, correct response.)

14. Let $e = a*1 + a*d = a + ad = \underline{\hspace{2cm}} = a(1 + d) =$
 $\underline{\hspace{2cm}}$

This gives the number of points, approximately, that you have earned in the “Preparation and Participation” portion of your grade.

15. The number of possible points, per the syllabus, is about 5 points per class meeting. You determined the number of class meetings to date, in the number c from above. Thus, the total possible, at any given time, is about 5 times c , or $5 * c$ or just $5c = \underline{\hspace{2cm}}$.

Part 2: Quiz and exam scores

(these can be found in your portfolio...)

20. What scores have you achieved on quizzes, to date? _____

What scores have you achieved on tests, to date? _____

Let g = the sum of your quiz and test scores = _____
points.

This gives the number of points that you have earned in the “Quizzes and Exams” portion of your grade.

21. The number of possible points is, generally: quizzes at 10 pts each, tests at 100 pts each (“one grade-point per percentage point” on tests), midterm at 150 points (“one and a half grade-points per percentage point” on midterm).

Let h = the number of points possible from testing =

Part 3: Email Journal

Per the syllabus, each entry made is worth a potential 10 points. You must submit one entry each week, unless otherwise instructed in class.

In your portfolio you have a list of journal entry submissions.

30. How many journal entries have you made?

Let j = _____ = the number of journal entries you’ve made.

31. If you have recorded the grades on them, list them and find the sum: k =

If not, approximate your number of points for journal submissions
by finding $10 * j$ = _____ and use this number for k .

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This gives the number of points that you have earned in the “Email Journal” portion of your grade.

32. The number of possible points is, generally: for each week of class there are 10 points possible for journals.

Let m = the number of journal entries which have been due = _____

Let n = points possible from journal entries = $10 * m$ = _____

Part 4: Portfolios

Concern for daily updatedness is included in the Prep and Part portion of daily grading.

The midterm portfolio review was worth up to 45 points (5 points per log).

40. Let q = the score from your portfolio review = _____.

This gives the number of points that you have earned in the “Portfolio” portion of your grade.

Per the syllabus, these are “graded” twice each semester, once at midterm (45 pts.) and once at the end of the term (135 pts).

Part 5: The Weighted Average of the Four Components

50. Given the above information, we can now collate and compute an approximation to your current grade in this course. The four parts have been assigned point values to reflect the weights given in the syllabus.

Your grade is computed as a percentage: the total number of points you’ve accumulated compared to the total number of points possible. This is computed by:

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(# pts in Prep & Part) + (# pts in Quiz & Exam) + (# pts in Journal) + (# pts for Portfolio)

divided by (the sum of the # pts possible in each of the four categories)

and can be expressed using the variables defined above, by the formula:

$$s = (e + g + k + q) / (5c + h + n + 45) = \text{_____}.$$

This number is the decimal representation of your overall average in this course.

The percent score associated with this decimal is $s * 100\% = \text{_____}$

In this class, percent scores translate via: 90 to 100 is an A, 80 to 89 is a B, 60 to 79 is a C. See the syllabus, or the UAS Catalog, for grade meanings.

Part 9: Analyses of Performance by parts

19. For comparative purposes, some may want to know what the number e found above means in terms of the letter grades. To determine this, we use percentages: how many points you have compared to how many points have been possible. We found the number of points achieved in the number e from above, as well as $5c$ as the number of possible points in this category.

Comparative score for "Prep. and Part.": $f = (e / 5c) =$ _____

Percent score for "P and P" portion: $f * 100\% =$ _____

29. For comparative purposes, some may want to know what the number g found above means in terms of the letter grades. To determine this, we use percentages: how many points you have, compared to how many points have been possible. You found the number of points achieved in the number g from above, and the number of points possible in the number h above.

Comparative score for "Quiz. and Exams": $i = (g / h) =$ _____

Percent score for "Q and E" portion: $i * 100\% =$ _____

39. For comparative purposes, some may want to know what the number k found above means in terms of the letter grades. To determine this, we use percentages: how many points you have, compared to how many points have been possible. You found the number of points achieved in the number k from above, with the number possible being n from above.

Comparative score for "Email Journal": $p = (k / n) =$ _____

Percent score for "Journal": $p * 100\% =$ _____

49. For comparative purposes, some may want to know what the number k found above means in terms of the letter grades. To determine this, we use percentages: how many points you have, compared to how many points have been possible. You know the number of points achieved, identified as the number q from above. The number of possible points is 45 for the midterm review, and 135 points more after the final exam.

Comparative score for "Portfolio": $r = (q / 45) =$ _____

Percent score for "Journal": $r * 100\% =$ _____

See the syllabus, or the UAS Catalog, for grade meanings. In this class, percent scores generally translate to: 90 to 100 is an A, 80 to 89 is a B, 60 to 79 is a C.