

**Interpreting and Using
Your
MDTP Results Report**

The **Test Results Report** begins with several pages of summary information intended for the instructor's use. These pages are followed by a set of individual student letters. Each summary information page contains the name of the test, the instructor, and course, along with the date of the test and a code for the test. The instructor provides this information on the Class Information Sheet when the tests are sent to the scoring center. The instructor should have a copy of the test available when reviewing the Test Result Report.

CLASS RESULTS

The class averages for each topic and for the entire test are reported on the **Class Results** page. These averages are expressed both as raw scores and as percentages. In addition, both the number and the percentage of students scoring at or above the critical level is reported for each topic. (Students meeting the critical level are well prepared for moving forward in the topic.)

The information reported on the **Class Results** page provides some indication of the overall level of preparedness that the class has for the mathematics course and with respect to each of the test topics. The topic results may be helpful in identifying areas in need of further review. They also provide an indication of which topics to examine first on the following page of the report. The total score may be a useful indication of the level at which the class should begin.

GRAPHIC DISPLAY OF CLASS RESULTS

The **Graphic Display of Class Results** page contains bar graphs indicating the percentage of students in the class answering each item correctly. These graphs are grouped by the topics of the test. Within each topic, the graphs are ordered by the percentage of students correctly answering each item. The graphs show the relative difficulty of each item for the class. The bar graphs provide a quick way of identifying those items that were most difficult for a class. These more difficult items might be examined first on the following page in the report. Similarly, the bar graphs provide a quick way of identifying the items and topics on which the students did best and, therefore, on which the curriculum and instruction are working most successfully.

ITEM ANALYSIS

The **Item Analysis** page reports the performance of the class on each item in the test. The results are presented separately in terms of both the percentage and by number of students choosing each response.

For each item, the following is listed: the item number; the key (*i.e.*, the correct response for the item); the topic of the item (or a code for the topic—the codes are listed on the cover letter of the report); the percentage of students who did not select any of the possible answers for the item (the “omits”); and, for each possible response (A) through (E), the percentage of students who selected that response. An asterisk (*) appears with the percentage of students who selected the key.

The **Item Analysis** page can provide very detailed information about the ways in which students are working the problems. We suggest that the previous pages of the report be used to identify

items of special interest to be examined first. An example of the kind of analysis that can be made is given in the next paragraph. Often, analysis of common wrong responses will indicate types of errors students are likely to have made.

Suppose that the following analysis is given for item 43:

OMIT	A	B	C	D	E
4	*17	4	56	4	13

Suppose further that item 43 is the following:

$$\frac{a-b}{\frac{1}{a} - \frac{1}{b}} =$$

- (A) $-ab$ (B) ab (C) $(a-b)^2$ (D) $a^2 + b^2$ (E) $2 - \frac{a}{b} - \frac{b}{a}$

The popularity of response (C) suggests that most of the students converted the denominator to $1/(a-b)$ before inverting and multiplying. It appears that they are still adding (or subtracting) fractions by adding denominators instead of first finding a common denominator.

Of course, other mistakes could also lead to the selection of (C). For example, each term in the denominator may have first been inverted, giving $a-b$, and then the result inverted and multiplied to yield (C). In any case, an analysis of students' responses to this item would show that a large percentage of students are having difficulty combining literal fractions.

INDIVIDUAL STUDENT RESULTS

The **Individual Student Results** page gives summary information about each student's performance on the test. This information includes the total number of items that the student answered correctly, the number of items in each topic that the student answered correctly, the number of items to which the student responded, and the last item to which the student responded. An asterisk (*) appears with each score that is below the critical level. The number of items attempted and the last item attempted may provide some indication of the extent to which a student had difficulty in finishing the test rather than in solving certain problems on it.

INDIVIDUAL STUDENT LETTERS

The **Individual Student Letters** give the student his or her total score on the test along with scores in each topic. These letters are available in English, and on request in Spanish. Further, the topics are separated into those in which the student scored at or above the critical level, those in which the student needs *some* review, and those in which the student needs *substantial* review. Each student should be given his or her own individual letter, encouraged to discuss the results with his or her instructor and parents, and should keep the letter for possible later use in tutorials or specially designed summer courses that may allow students to concentrate on those topics needing review.

Help your students with activities designed to strengthen their weak areas:

- Give each student his or her individual report, unless the entire class did poorly. In the case that the whole class does poorly, consider giving a post test at the end of the semester or year. Then give students their pre- and post- letter, emphasizing the growth they've shown over the year.
- Plan for and incorporate indicated remediation and enrichment into regular instruction.
- Consider tutorial sessions before or after school geared to the identified topics.
- Investigate the possibility of district wide special summer programs to prepare students for the fall.
- Discuss curricular modifications to prevent recurrence of common weaknesses.

Avoid:

- Having too narrow a focus on specific items when working on weaknesses. Avoid teaching a specific problem as that will undermine the diagnostic value of the test should you choose to retest. Instead, work with students on similar and related problems.
- Using a student's MDTP total score as the sole placement criterion.
- Using a student's MDTP results as part of a student's course grade.

**If you have questions about use of MDTP results or next steps in the classroom,
please contact the UCLA MDTP Site Office:**

**For educational and administrative use of
exams:**

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See mdtpucla.org for more information

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