

CAT-4 provides reports at both the school and district levels. Interpreting these reports for the multiple-choice components requires some understanding of the difference between norm-referenced information and criterion-referenced information. *Norm-referenced* information reveals how students did on a test relative to other same-grade students. *Criterion-referenced* information reveals how students did on part of a test relative to pre-defined performance criteria.

The In-Service Folder provides an example of a school-level report called the **School Administrator’s Summary**. The left column of the report contains information about the school and the tests. The name of the school and district/division are shown. For this example, the report is for students in grade 6.1, meaning that the students wrote these tests after completing one month of grade 6. In other words, these grade 6 students wrote the tests in October. They wrote the Level 15 tests, which cover the curriculum up to the end of grade 5.

Norm-Referenced Scores

One way to look at how well students did on a test compared to others is to report the percent of students who attained scores that are average or above average compared to other same-grade students across Canada. Students who fall in stanines 4–6 are considered average, and students who fall in stanines 7–9 are considered above average. (For a detailed description of stanines, see “Interpretation of Score Reports at the Student and Class Levels.”) By definition, 77% of the Canadian population is in the average or above average range (in stanines 4–9). This is represented by the hatched line in the graph on **Page 1** of the School Administrator’s Summary. The bars in the graph show the percentage of students in the school (dark bars) and the percentage of students in the district/division (grey bars) falling in stanines 4–9 for each of the tests.

Page 2 of the School Administrator’s Summary shows the percentage of students in the school falling in each of the stanine categories for each of the tests. The distribution for each test can be compared to the distribution for same-grade students across Canada.

Another way to look at how well students did on a test compared to others is to report the average percentile rank for the group. (For a detailed description of percentile ranks, see “Interpretation of Score Reports at the Student and Class Levels.”) **Page 3** of the School Administrator’s Summary shows a graph with a

hatched line at percentile rank 50. This is the Canadian average by definition. The bars in the graph show the average percentile rank for the school (dark bars) and for the district/division (grey bars).

Page 4 of the School Administrator’s Summary shows the average grade equivalent for the group. (For a detailed description of grade equivalents, see “Interpretation of Score Reports at the Student and Class Levels.”) By definition, the average grade equivalent for Canada is the grade level at which students were tested (grade 6.1 in this case). The dark bars show the average grade equivalent attained by the grade 6 students in the school (who wrote in October) and the grey bars show the average grade equivalent attained by all the grade 6 students in district (who wrote in October).

Criterion-Referenced Scores

Pages 5 and 6 of the School Administrator’s Summary show the distribution of criterion-referenced scores for the school. (The District Administrator’s Summary would show the distribution of criterion-referenced scores for the whole district/division.) For each test objective (e.g., Literary Text under Reading), the bar graph shows the percentage of students scoring Low, Competent and Proficient for that objective. The test objectives for the language tests are shown on Page 5 and the test objectives for the math tests are shown on Page 6.

The criterion-referenced information in the School Administrator’s Summary can be used to help plan instruction. (For more information, refer to “Linking Assessment to Instruction at the Student and Class Levels.”) For additional support of the teacher’s use of test results, the CAT-4 *Teacher Resource Manual* provides instructional activities organized by the CAT-4 test objectives. The *Teacher Resource Manual* can be purchased at www.canadiantestcentre.com or by calling 1 800 668 1006.

The In-Service Folder provides an example of a school-level report called the **School Item Analysis Report**. The first column of the table contains the name of the test (e.g., Mathematics) and the names of the test objectives (e.g., Number Sense) and items (e.g., Item 01).

The first row in the table, below the row of headings, shows the average number-correct score on the Mathematics test for different reference groups. For example, the average number-correct Mathematics score for students across Canada—who

wrote the test in the fall of grade 6—is 35.0. As can be seen from the heading, this average is based on 2243 students across Canada. The average for students in Western Canada is 34.1 (based on a sample of 653 students) and the average for students in the district/division is 33.8. For the school, the average is 38.8. The plus sign “+” beside the school average for the Mathematics test indicates that the average for the school is statistically significantly higher than the average for the district/division.

The second row of the table shows the average number-correct scores for only those items measuring Number Sense. The average for the school is 6.7, which is higher than the district average of 6.4. The difference is not statistically significant, however, so a plus sign does not appear beside the school average. The plus sign beside the district average indicates that the district average is statistically significantly higher than the average for Western Canada (6.1). (District performance can be compared to the performance of Western Canada, Ontario or Atlantic Canada.)

The third row of the table shows the percentage of students correctly answering Item 01, which is a Number Sense item. In this example, 100% of students in the school answered the item correctly, which is significantly higher than the 97% of the students in the district answering the item correctly.

The two columns to the far right of the report compare the performances of males in the school to females in the school. For example, the percentage of males in the school answering Item 14 correctly (73%) is statistically significantly lower than the percentage of females in the school answering the item correctly (100%).

The In-Service Folder also provides an example of the **District Item Analysis Report**. In this report, information about district sub-groups can be reported. In this example, the average scores for ELL students and French Immersion students are compared to those for the district. (The sub-groups are defined by the user, and students can be assigned to sub-groups by filling in “Special Groups” codes on the student answer documents.) The two columns to the far right of the report compare the performance of males in the district to the performance of females in the district.

The School and District Item Analysis reports can be used to identify specific areas of strength and need for a school, a sub-group within the district and/or the district as a whole. The matching of the test questions to the provincial curricula can be found at www.canadiantestcentre.com. The matching tables allow schools to see the connection between the difficulties students may be having on particular types of test questions and what parts of the curriculum may require more review. For additional support of the teacher’s use of test results, the *CAT-4 Teacher Resource Manual* provides instructional activities organized by the CAT-4 test objectives. The *Teacher Resource Manual* can be purchased at www.canadiantestcentre.com or by calling 1 800 668 1006.