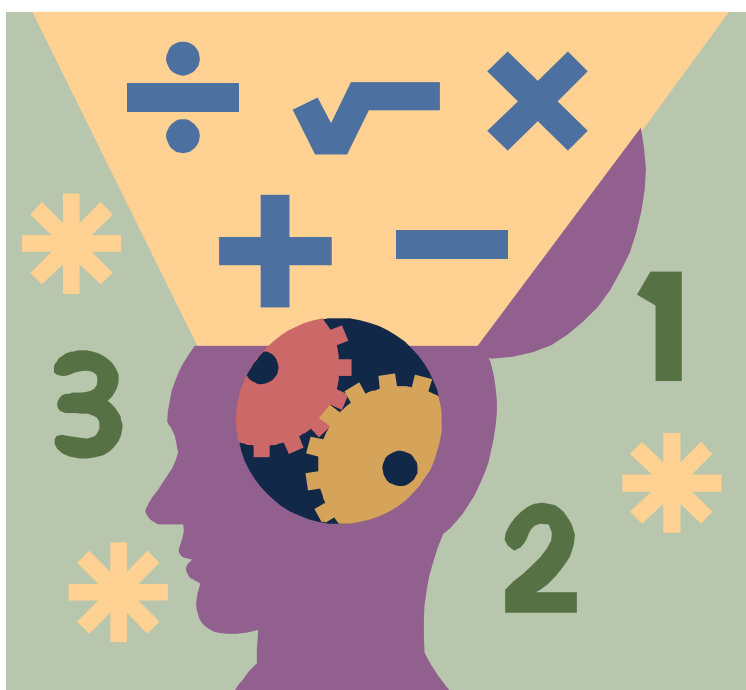




Grade 9 EQAO Assessment of Mathematics 2005-2006

Overview of Results



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Grade 9 EQAO Assessment of Mathematics 2005-2006

Overview of Results

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Grade 9 EQAO Assessment of Mathematics 2005–2006

Introduction

This report contains an overview of the 2005–2006 Education Quality and Accountability Office (EQAO) provincial assessment in mathematics for grade 9. Copies of the full *Provincial Report* can be downloaded from EQAO's web site, which is located at www.eqao.com.

What is EQAO?

EQAO is an independent, arm's-length agency of the provincial government that provides parents, teachers, and the public with reliable and valid information about student achievement. EQAO reports provide information for improvement, which educators, parents, policy makers and others in the education community can use to improve learning and teaching.

EQAO conducts a range of province-wide assessments. The grade 9 assessment of mathematics was introduced in 2000–2001. It involves all students, occurs annually, and provides information on what students have learned in mathematics. This assessment provides both individual and system data on student achievement. Parents receive an *Individual Student Report*, and schools and school boards produce local reports for parents and their communities.

What was the assessment?

The grade 9 mathematics assessment measures how well students have met the provincial expectations in *The Ontario Curriculum*. The assessment covers knowledge and skills in mathematics that students are expected to have acquired by the end of the school semester in both academic and applied programs. Specifically, the assessment is based on the four curriculum strands of mathematics: Number Sense and Algebra, Linear Relations, Analytic Geometry (academic program only), and Measurement and Geometry. Students enrolled in the applied mathematics program complete a different assessment than students enrolled in the academic mathematics program. Students enrolled in first-semester applied and academic mathematics programs wrote the assessment in January 2006, and students enrolled in second-semester and full-year applied or academic mathematics programs wrote the assessment in May 2006.

Who participated in the assessment?

Grade 9 Peel students (9,612) participated in both the applied and academic assessments during regular classes. Exemptions were permitted only where students would be unable to respond to the assessment in any way and/or where they would be adversely affected as a result of participation. Exemptions were made only with the written informed consent of the parent(s) or guardian(s). In specific circumstances, teachers were allowed to provide certain kinds of assistance to students with special needs. Two percent of grade 9 students were exempted from the applied mathematics assessment and less than 1% were exempted from the academic mathematics assessment.

How was student work marked?

EQAO reports on student achievement in mathematics using a four-level scale. The four levels describe how well students performed in each subject area. EQAO has aligned its four levels of achievement to those of the *Ontario Student Report Card*.

The Ministry of Education has set *Level 3* as the provincial standard for grade 9 achievement. *Level 1* identifies achievement that falls much below the provincial standard. *Level 2* identifies achievement that is approaching the provincial standard. *Level 4* identifies achievement that surpasses the provincial standard.

Marking was done in July 2006 by specially trained principals and teachers. EQAO developed scoring scales by taking the four achievement levels established by the Ministry and applying them to actual student work. Markers used EQAO's scales to score student work. The scoring was monitored to ensure that it was objective, consistent, and reliable.

Some key messages about the EQAO assessments

- ✓ EQAO urges principals to ensure that school councils are fully informed about the assessment and are encouraged to play an active role in reviewing and updating the school's Action Plan for Improvement.
- ✓ EQAO encourages schools and school boards to include strategies in their Action Plans for Improvement that will help both boys and girls improve their achievement.
- ✓ Parents, educators, policy-makers, and the public should use the overall results to measure improvements in student achievement over time.
- ✓ EQAO encourages schools and school boards to be proactive in reporting results to parents and their communities.
- ✓ The achievement data must be interpreted in relation to contextual data that schools and school boards have gathered.
- ✓ Teachers and principals should use samples of student work, anchor papers provided by EQAO, and Ministry exemplar documents, to help students and parents understand what work at Levels 3 and 4 looks like.
- ✓ School boards should provide opportunities for teachers and principals to share assessment expertise and successful assessment practices.

Grade 9 EQAO Assessment

Peel Board and Provincial Results 2005–2006

Background Characteristics

- 9,612 grade 9 Peel students (2,638 in applied mathematics in 31 schools; 6,974 in academic mathematics in 27 schools) participated in EQAO testing; 2% were fully exempt from the assessment in applied mathematics and <1% were fully exempt from the assessment in academic mathematics.
- Of those students who took the applied mathematics assessment, 12% were ESL/ELD learners and 23% were students with special needs (excluding gifted). Five percent of students who took the academic mathematics assessment were ESL/ELD learners and 3% were students with special needs (excluding gifted).

Student Achievement

Achievement results in this report are expressed as the percentage of students achieving at each level. This percentage is based on all of the students in the grade (which includes the "no data" and "exempt" categories), and for students who participated in the assessment. The overall achievement results in mathematics reported for both the Peel Board and the province may not add to 100%, due to rounding.

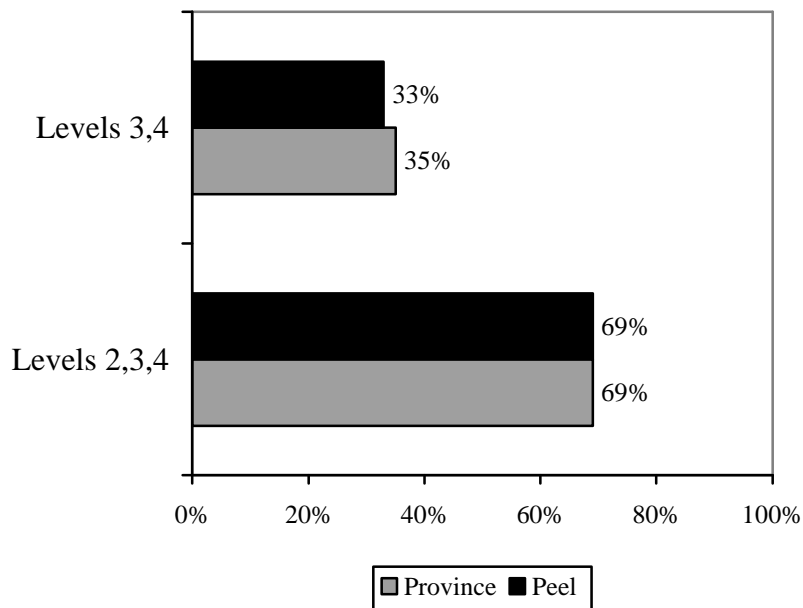
TABLE 1

EQAO 2005–2006 Grade 9 Results: Peel Board and Provincial Comparisons
 (All Students – Includes Exempt, No Data, Below Level 1)

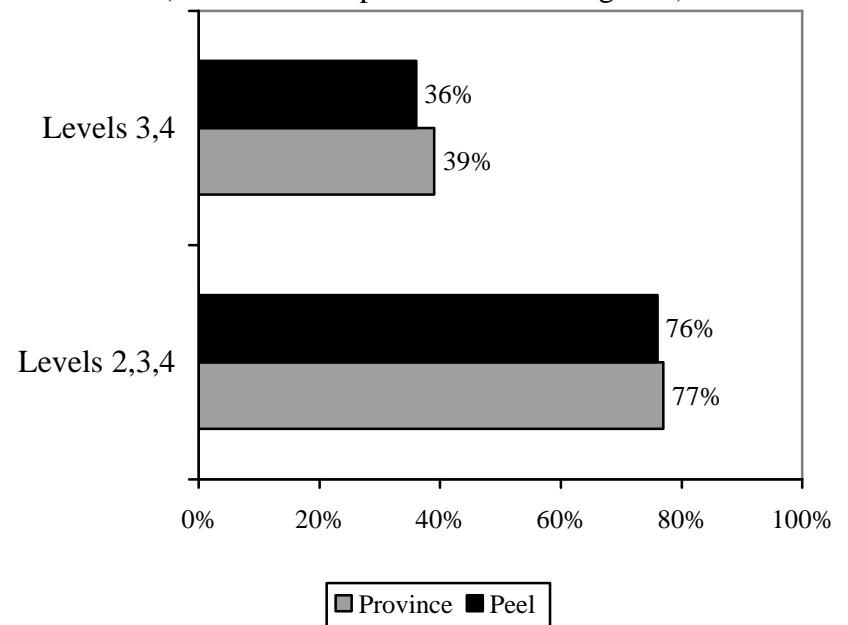
	Exempt		No Data		Below Level 1		Level 1		Level 2		Level 3		Level 4	
	Peel	Province	Peel	Province	Peel	Province	Peel	Province	Peel	Province	Peel	Province	Peel	Province
Applied Mathematics	2%	2%	6%	8%	8%	7%	15%	14%	36%	34%	29%	31%	4%	5%
Academic Mathematics	<1%	<1%	1%	1%	1%	1%	10%	9%	18%	17%	64%	65%	6%	6%

Figure 1*

Applied Mathematics - All Students

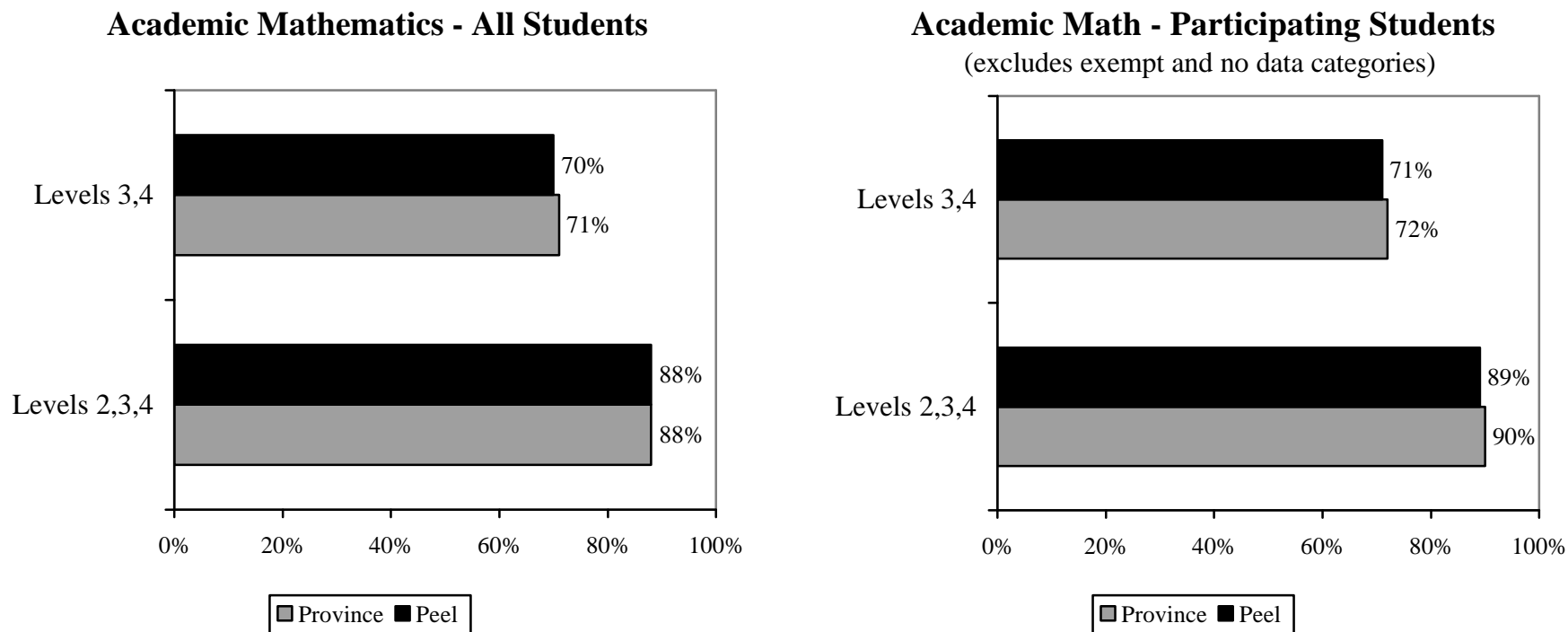


Applied Math - Participating Students
 (excludes exempt and no data categories)



*Due to rounding, these percentages may not be the sum of Levels 2,3,4 and Levels 3,4 as noted in the above table.

Figure 1 (continued)



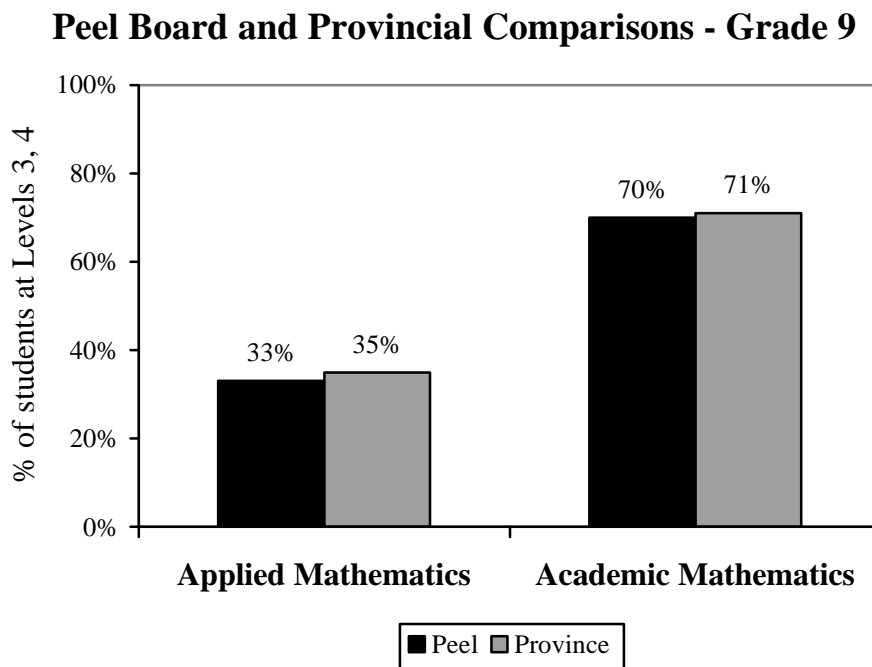
*Due to rounding, these percentages may not be the sum of Levels 2,3,4 and Levels 3,4 as noted in the above table.

When compared to the province, Peel grade 9 students scored:

- slightly below the provincial average in Levels 3, 4 for applied mathematics.
- the same as the provincial average in Levels 2, 3, 4 for applied mathematics.
- slightly below the provincial average in Levels 3, 4 for academic mathematics.
- the same as the provincial average in Levels 2, 3, 4 for academic mathematics.

FIGURE 2

EQAO 2005–2006 Grade 9 Results: Peel Board and Provincial Comparisons (All Students – Includes Exempt, No Data, Below Level 1)



When compared to the province:

- Peel students in grade 9 scored slightly below the provincial average in applied mathematics and academic mathematics.

For Applied Mathematics (Levels 3, 4)

Peel students scored:

- 2% lower than the province

For Academic Mathematics (Levels 3, 4)

Peel students scored:

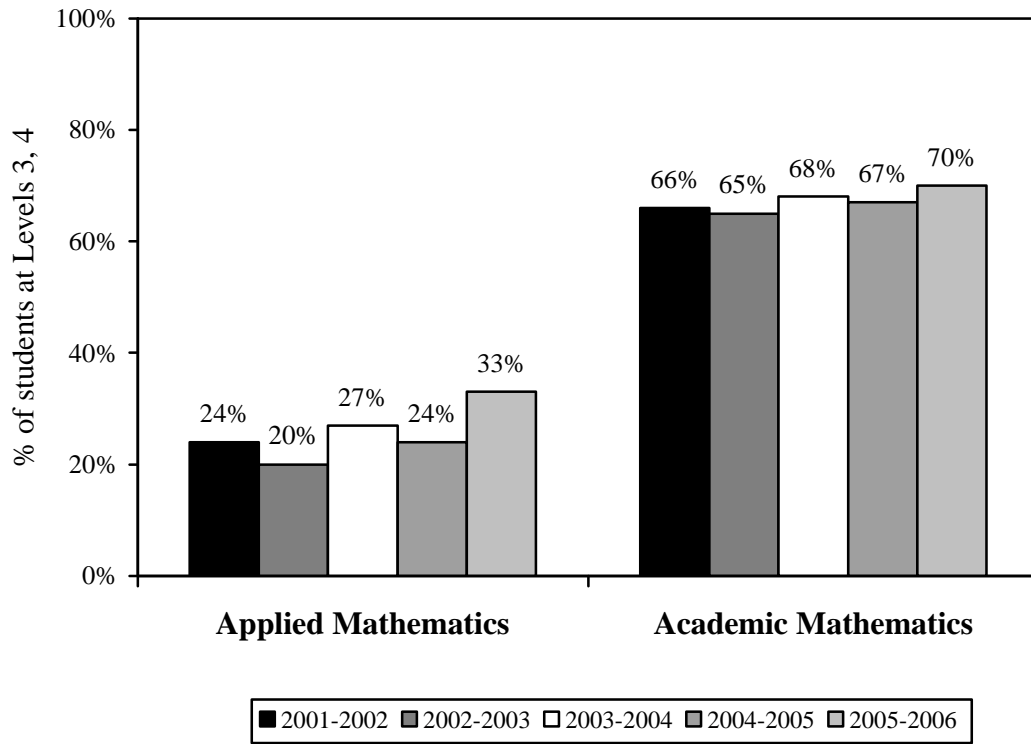
- 1% lower than the province

FIGURE 3

**EQAO 2005–2006 Grade 9 Results:
Peel Board Comparisons of Change in Scores from 2001–2002 to 2005–2006
(All Students – Includes Exempt, No Data, Below Level 1)**

Levels 3, 4

**Peel Board Comparisons of Change in Scores
from 2001-2002 to 2005-2006**



When compared to last year's results (2004-2005), Peel students scored:

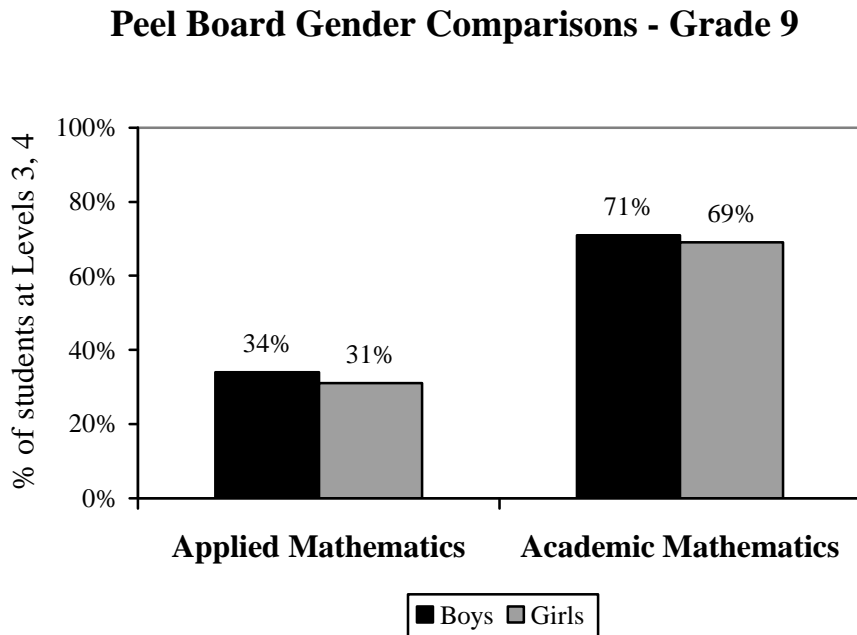
- 9% higher in 2005–2006 in applied mathematics.
- 3% higher in 2005-2006 in academic mathematics.

When compared to 2001–2002 results (5-year trends), Peel students scored:

- 9% higher in 2005–2006 in applied mathematics.
- 4% higher in 2005-2006 in academic mathematics.

FIGURE 4

EQAO 2005–2006 Grade 9 Results: Peel Board Gender Comparisons (All Students – Includes Exempt, No Data, Below Level 1)



When comparing the results of Peel boys and girls:

- Peel boys in grade 9 scored above girls in both applied mathematics and academic mathematics.

For Applied Mathematics (Levels 3, 4)

Peel boys scored:

- 3% higher than girls

For Academic Mathematics (Levels 3, 4)

Peel boys scored:

- 2% higher than girls

TABLE 2

Peel Board Gender Gap Analysis* – Grade 9 Extent to Which Boys Outperformed Girls in Levels 3, 4

		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Grade 9	Applied Mathematics	0%	0%	-1%	4%	3%
	Academic Mathematics	1%	1%	1%	3%	2%

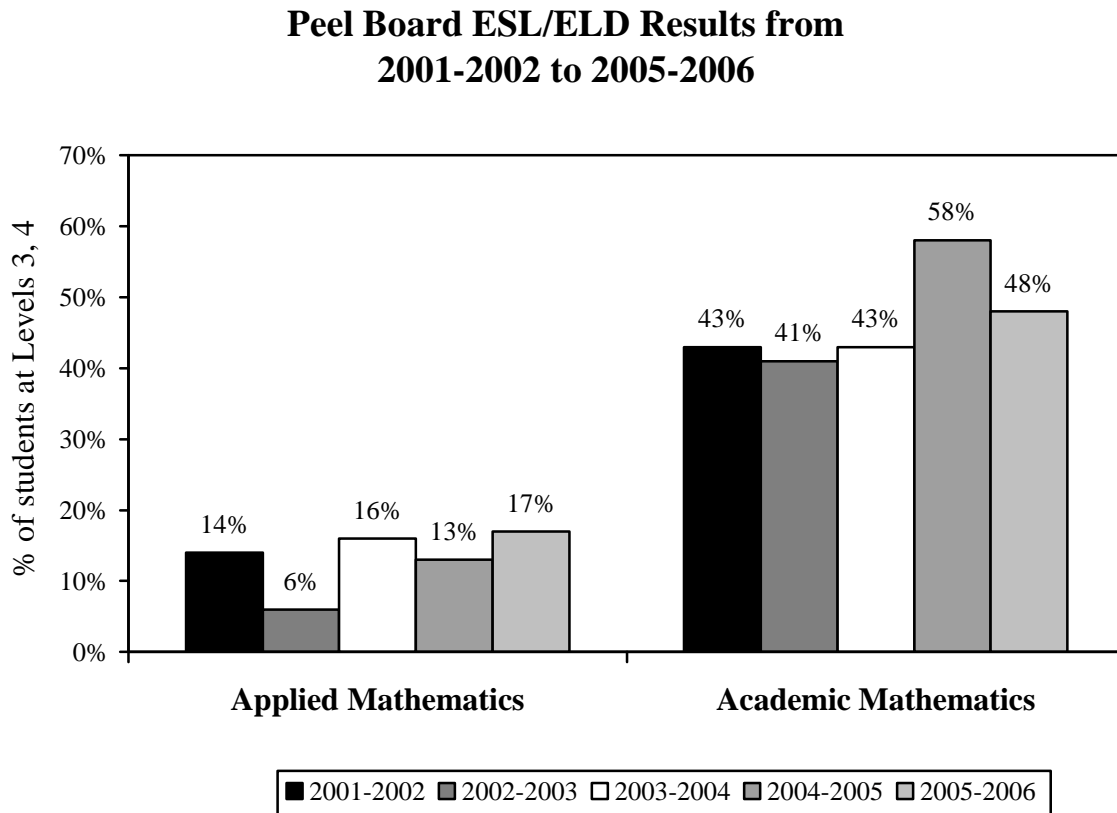
*Note: Gender Gap Analysis based on data from the Peel Board EQAO report.

- The gender gap in achievement in both grade 9 applied and academic mathematics has increased slightly since 2001–2002.

FIGURE 5

EQAO 2005–2006 Grade 9 Results: Peel Board Comparison of ESL/ELD Scores from 2001-2002 to 2005-2006

Levels 3, 4



When compared to last year's results (2004-2005), Peel Board ESL/ELD students scored:

- 4% higher in 2005–2006 in applied mathematics.
- 10% lower in 2005–2006 in academic mathematics.

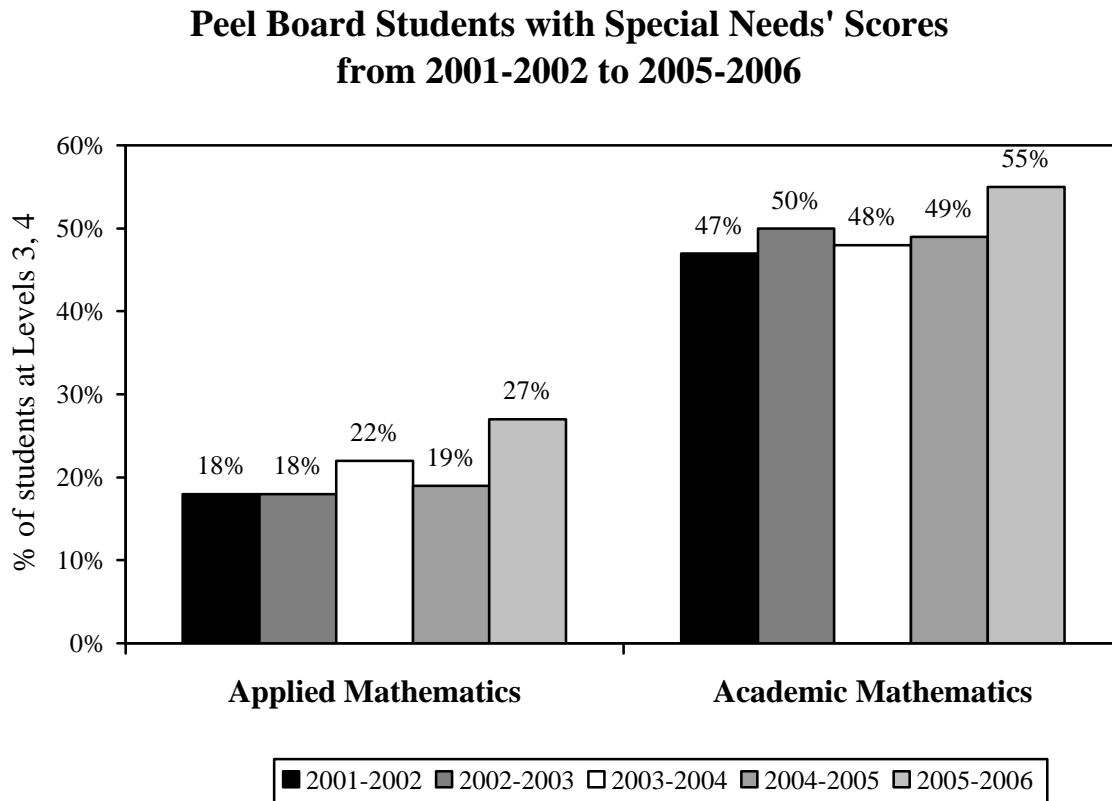
When compared to 2001–2002 results (5-year trends), Peel Board ESL/ELD students scored:

- 3% higher in applied mathematics.
- 5% higher in academic mathematics.

FIGURE 6

EQAO 2005–2006 Grade 9 Results: Peel Board Comparisons of Change in Students with Special Needs' Scores (excluding gifted) from 2001–2002 to 2005–2006

Levels 3, 4



When compared to last year's results (2004–2005), Peel students with special needs scored:

- 8% higher in 2005–2006 in applied mathematics.
- 6% higher in 2005–2006 in academic mathematics.

When compared to 2001–2002 results (5-year trends), Peel students with special needs scored:

- 9% higher for applied mathematics.
- 8% higher for academic mathematics.

Summary of Results, 2005–2006 for Levels 3, 4

1. Peel Board and Provincial Results

- Grade 9 Peel students scored 2% below the provincial results in applied mathematics.
- Grade 9 Peel students scored 1% below the provincial results in academic mathematics.

2. Yearly Comparisons (Peel Board)

- Grade 9 students scored 9% higher in applied mathematics when compared to last year.
- Grade 9 students scored 3% higher in academic mathematics when compared to last year.

3. Five-Year Comparisons (Peel Board)

- Grade 9 students scored 9% higher in applied mathematics than in 2001–2002.
- Grade 9 students scored 4% higher in academic mathematics than in 2001–2002.

4. Gender Yearly Comparisons (Peel Board)

- Boys scored 3% higher than girls in applied mathematics.
- Boys scored 2% higher than girls in academic mathematics.

5. ESL/ELD Yearly Comparisons (Peel Board)

- Grade 9 ESL/ELD learners scored 4% higher in applied mathematics when compared to last year.
- Grade 9 ESL/ELD learners scored 10% lower in academic mathematics when compared to last year.

6. ESL/ELD Five-Year Comparisons (Peel Board)

- Grade 9 ESL/ELD learners scored 3% higher in applied mathematics than in 2001–2002.
- Grade 9 ESL/ELD learners scored 5% higher in academic mathematics than in 2001–2002.

7. Students with Special Needs' Yearly Comparisons (Peel Board)

- Grade 9 students with special needs scored 8% higher in applied mathematics when compared to last year.
- Grade 9 students with special needs scored 6% higher in academic mathematics when compared to last year.

8. Students with Special Needs' Five-Year Comparisons (Peel Board)

- Grade 9 students with special needs scored 9% higher in applied mathematics than in 2001–2002.
- Grade 9 students with special needs scored 8% higher in academic mathematics than in 2001–2002.