

'Shocking': 40% of Grade 9 students fail math in CBE, even with lower standards

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Only 59.4 per cent of students with the Calgary Board of Education achieved acceptable standards in the Grade 9 math provincial achievement test (PAT) for the 2017-18 school year.

As public school trustees on Tuesday debated standardized test results showing more than 40 per cent of Grade 9 students failed their math exams last year, officials also confirmed that acceptable standards were much lower than 50 per cent.

According to data released last week, only 59.4 per cent of students with the Calgary Board of Education achieved acceptable standards in the Grade 9 math provincial achievement test for the 2017-18 school year, meaning more than 40 per cent failed.

But information came to light Tuesday that acceptable standards for Grade 9 math provincewide was a minimum score of 42 per cent. And for Grade 6 math provincewide, acceptable standards were achieved with a score as low as 41 per cent.

The province says it sets the cut-off scores below 50 per cent to ensure more students achieve acceptable standards on tests that are more difficult.

But parent groups call the data on cut scores shocking, and say it remains hidden so the system does not have to be as accountable and that families think students are doing better than they actually are.

“These are shockingly low numbers,” said Sarah Bieber, of the Kids Come First parent advocacy group.

“It seems strange to me that the percentage deemed acceptable, the cut score, varies from year to year, or that these cut scores should be so low.

“At the very least, parents should be well informed about what constituted an acceptable grade. Cut scores should be well-advertised and parents should be provided with the rationale behind choosing that particular cut score.”

Bieber added that cut scores have been in the 40s for years, proving that “there is a crisis in math education in this province. Students do not have adequate mastery of basic mathematical concepts.”

Education Minister David Eggen explained that cut scores are adjusted up or down annually based on an evaluation of the difficulty of the test. Each year an exam includes questions from the previous year as well as a new set of questions. Through analysis of results, or psychometrics, a cut score is determined.

However, cut scores for Grade 6 and Grade 9 math have remained well below 50 per cent for five years.

In Grade 9 math, for instance, cut scores were at 46 per cent in 2013-14, 46 per cent in 2014-15, 48 per cent in 2015-16, 44 per cent in 2016-17 and as low as 42 per cent in 2017-18, averaging 45 per cent over five years. In Grade 6, cut scores averaged 43 per cent over the same time period.

Last year's cut score was an average for a new two-part Grade 9 exam — part A containing 20 numerical response questions testing fluency in mental math without the use of a calculator, and part B containing 32 multiple choice questions and eight numerical response questions allowing the use of a calculator and manipulatives.

Public school trustee Lisa Davis, who ran her campaign last fall on fixing math problems at the CBE, tweeted the cut scores after neither the CBE nor the Calgary Catholic School District made them public when presenting standardized test score results last week.

“Unlike diploma exams, whose pass/fail cut-off is 50 per cent, PATs cut-off scores vary by subjects and grade. In Grade 9 the cut-off score for English is 51 per cent and for Social Studies it's 54 per cent.

“But for math Grade 9 this year, it is 42 per cent, compared to last year's 44 per cent. Parents have asked how scores in the low 40s are considered acceptable, and it is a great question. The math cut scores are the lowest of all subjects.”

CBE chair Trina Hurdman said the local district is not happy with math results and says they need more funding from the province to support struggling students in the classroom.

“For Grade 9, the results were disappointing to say the least,” Hurdman said.

“We need to develop computational fluency and ensure students have a very strong foundation in those basic skills.”

Hurdman said the CBE has made efforts to better develop teachers in overall math skills through math coaches, dispersing as many as 31 experts across 61 schools this year.

Math practice time has also been increased in the classroom by 25 per cent, Hurdman added.

“It’s difficult to show improvement in just a single year. Teachers, even with the assistance of a coach, need time to develop their own capacity on how to better help students.”

“We’re hopeful, given the strategies, that we will see more success over time.”

Provincewide, Grade 9 math results for 2017-18 were also poor, with only 66.7 per cent of students achieving acceptable standards for the PAT last year, a more than 10-per-cent drop from 75.5 per cent in 2016-17.