

Exhibit M9.4: Examinations with Consequences for Students in Advanced Mathematics Programs (Tracks)

Reported by National Research Coordinators

| Country | Examinations with Consequences for Individual Students | Grades at Which Examinations with Consequences for Individual Students are Given | Format of Examinations with Consequences for Individual Students | Comments |
|--------------------|--|--|--|---|
| France | ● | Grade 12 | Written and/or oral examinations | Each subject examination grade is weighted differently according to the track students are attending. In the scientific track, mathematics and other science grades altogether are weighted as much as half the student's total grade average. |
| Italy | ● | Grades 8 and 13 | Written and oral examinations | Final examinations for technical and vocational secondary schools (Grade 13) also give students an opportunity to find a job. |
| Lebanon | ● | Grade 12 | Written examinations | At the end of the third year of the secondary cycle or Grade 12, students have to pass the Official Baccalaureate exams for four sections—life sciences, general sciences, economics, and humanities. The purpose of these exams is for the students to be able to continue with their university studies. |
| Norway | ● | Grades 12 and 13 | Written or oral examinations | A written examination is set and marked centrally (at national level) and an oral examination is prepared and marked locally. About 40% of the first year (Mathematics R1) students and about 60% of the second year (Mathematics R2) students are sampled for the national written examination. For the local oral examination, about 5% and 15% of the students in the respective courses are sampled for testing. |
| Portugal | ● | Grades 9 and 12 | Written examinations | Nationwide final examinations are produced by an independent educational assessment public institute (IAVE, I. P.). The application and scoring of the examinations is coordinated by a National Exam Jury Board under the supervision of the General Education Directorate of the Ministry of Education. |
| Russian Federation | ● | Grade 11 | Written examinations | Tests for the compulsory state examination in Grade 11 are given at both the Basic and Profile levels, and all graduates are offered a choice to take one of these exams, no matter what course they studied in Grades 10 and 11. |
| Slovenia | ● | End of upper-secondary education | There are several examination formats—written only; both written and oral; both written and practical; written, oral and practical; practical only; and an examination presentation. | Achievement on the Matura examination and achievement in the last two years of schooling are used to select students where there is a limit to the number of candidates for a university program. The Matura is prepared and administered by the National Examination Center. |
| Sweden | ○ | n/a | n/a | Compulsory national tests are developed by the Swedish National Agency for Education, which is the educational authority appointed by the National Ministry of Education for the administration of the school system. These national tests do not have direct consequences for the students because they are intended only to support teachers' assessment of students. |
| United States | ○ | n/a | n/a | Although there are no national exams with consequences for individual students, many high school students take Advanced Placement (AP) or International Baccalaureate (IB) courses that culminate with an end-of-course exam. Students can take these AP or IB written exams at a price and, if they score well, can earn course credit at many colleges and universities. In addition, to apply for admission to most colleges and universities in the United States, students in Grades 11 and 12 take written exams to demonstrate their readiness for college-level work. Private companies (e.g., ACT, College Board) offer these exams in different subjects to students for a price. |

● Yes
○ No

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS Advanced 2015