Exhibit 20: National Policies Regarding Use of Digital Devices in Mathematics Examinations

Reported by National Research Coordinators

Country	National Policies Regarding Use of Digital Devices in Mathematics Examinations	
	Grade 4	**Grade 8**
Albania	No policy	–
Armenia	No policy	–
Australia	No explicit policy. However, the National Assessment Program—Literacy and Numeracy (NAPLAN) has a policy that calculators are not allowed in the national assessments in Years 3 and 5 (national assessment does not take place in Year 4).	No explicit policy, however NAPLAN has a policy that calculators are allowed for certain sections of the assessments in Years 7 and 9 (national assessment does not take place in Year 8).
Austria	No explicit policy	–
Azerbaijan	No policy	–
Bahrain	No policy	No policy
Belgium (Flemish)	No explicit policy. Certain students that need special accommodations may use computers and calculators during lessons and examinations.	–
Bosnia and Herzegovina	No policy	–
Bulgaria	No policy	–
Canada	No policy	–
Chile	No explicit policy. The national curriculum includes ICT learning goals, and the Ministry of Education provides teachers with guidance on using ICT in the classroom and digital resources.	Same as for Grade 4
Chinese Taipei	No explicit policy. Calculators and computers are not allowed in high-stakes assessments. Therefore, students are prohibited from using them in formal tests in school. However, some teachers may allow students to use technology for quizzes.	Same as for Grade 4
Croatia	No policy	No policy
Cyprus	No policy	Calculators are allowed during examinations.
Czech Republic	No policy	–
Denmark	The national mathematics test is a computer-based adaptive test. It is mandatory in Grade 3 and optional in Grade 4.	–
Egypt	–	Only calculators are allowed during examinations.
England	No explicit policy, as there are no prescribed tests or examinations for Year 5. For the standard assessment tests in Grade 1 and Year 2, calculators are not permitted.	No explicit policy, as there are no prescribed tests or examinations for Year 9. Scientific calculators are allowed for parts of the General Certificate of Secondary Education (GCSE) examinations taken at the end of Grade 10; GCSE examinations are paper-based assessments.
Finland	No policy	No policy
France	No policy	No policy
Georgia	Computer-based national assessments (census-based) are administered in Grades 4, 6, and 10.	No policy
Germany	No policy	–
Hong Kong SAR	In general, primary students are not allowed to use calculators during tests and examinations.	Scientific calculators with specified models are allowed in public examinations for Secondary 3 (Grade 9). There are no public examinations for Secondary 2 (Grade 8). Schools have their own policies regarding the use of digital devices. In general, scientific calculators are allowed during school tests and examinations of mathematics for all secondary levels (Grade 7–12).
Hungary	No policy	No policy
Iran, Islamic Rep. of	Calculators are not allowed during tests and examinations.	The use of calculators and computers is permitted but not mandated and is based on the teachers' discretion.
Ireland	No policy. There are references to the use of digital devices in general but not specific to Grade 4 mathematics tests or examinations.	Students are permitted to use calculators during state examinations.
Israel	–	Calculators are allowed during testing.
Italy	No policy	No policy
Japan	No policy	No policy
Jordan	–	Students are allowed to use calculators during mathematics lessons and examinations.
Kazakhstan	No policy	No policy

A dash (–) indicates data not provided.

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(Continued)

Country	National Policies Regarding Use of Digital Devices in Mathematics Examinations	
	Grade 4	**Grade 8**
Korea, Rep. of	Assessment of learning in mathematics can provide students with opportunities to use technological tools including calculators, computers, and educational software, depending on the learning content and the methods of assessment.	Same as for Grade 4
Kosovo	No policy	–
Kuwait	No policy	No policy
Latvia	No policy	–
Lebanon	–	No policy
Lithuania	No explicit policy, but primary school teachers can use computers (or tablets) in the learning process at their discretion. Use of calculators in primary schools is not recommended.	No explicit policy, but students begin compulsory IT courses in Grade 5. Teachers can use computers (or tablets) in the learning process at their discretion.
Malaysia	–	A special circular on the use of scientific calculators in the school and public examination has been distributed to all schools. Students are only allowed to use nonprogrammable scientific calculators during examinations.
Malta	No policy	–
Montenegro	No policy	–
Morocco	Students are not allowed to use any digital device during tests or examinations.	The use of nonprogrammable calculators during examinations is sometimes allowed.
Netherlands	No policy	–
New Zealand	No policy. The use of technology is discussed generally, but not specifically within the mathematics area of the curriculum.	Same as for Grade 4
North Macedonia	No policy	–
Northern Ireland	No policy, as there are no national tests or examinations in Grade 4.	–
Norway	No policy	No policy
Oman	No policy	No policy
Pakistan	No policy	–
Philippines	No policy, although students are barred from using technology to capture test items during national examinations.	–
Poland	No policy	–
Portugal	No policy	No policy
Qatar	No policy	No policy
Romania	–	Students are not allowed to use any digital device during tests and examinations.
Russian Federation	No policy	No policy
Saudi Arabia	Digital devices are not allowed during tests.	Same as for Grade 4
Serbia	No policy, as there are no national tests or examinations in Grade 4. Students are not allowed to use any digital device during tests or oral examination, with the exception of students with individual educational plans.	–
Singapore	No policy. Calculators are introduced only after Grade 4.	No policy
Slovak Republic	No policy. Teachers and schools have discretion over decisions about calculator use.	–
South Africa	No policy	No policy
Spain	No policy	–
Sweden	No policy, but there are some statements about digital tools in the core content of the syllabus that are supposed to be assessed.	Same as for Grade 4
Turkey	No policy	No policy
United Arab Emirates	No policy	The multiple-choice items on end of term assessments (40–50% of the assessment) are administered via computers.

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Country	National Policies Regarding Use of Digital Devices in Mathematics Examinations	
	Grade 4	**Grade 8**
United States	Most states have standards for calculator use on state-level assessments as well as the type of calculator. In the majority of states, calculators are not permitted on Grade 4 mathematics assessments. Most states give their mathematics assessments via computers or tablets and specify whether a physical or a virtual calculator (e.g., an app on a tablet) may be used.	Most states have standards for calculator use on state-level assessments as well as the type of calculator. In the majority of states, calculators are permitted on Grade 8 mathematics assessments. Most states give their mathematics assessments via computers or tablets and specify whether a physical or a virtual calculator (e.g., an app on a tablet) may be used.
Benchmarking Participants		
Ontario, Canada	No policy. According to the Education Quality and Accountability Office Guide for Accommodations, Special Provisions and Exemptions, students may receive accommodations involving technology for large-scale assessments.	Same as for Grade 4
Quebec, Canada	No policy	There are no guidelines or policies regarding the use of technology. The government suggests the use of some tools, such as scientific calculators and software, but it is not mandatory. There are no guidelines or policies regarding the use of technologies for secondary mathematics examinations.
Moscow City, Russian Fed.	In accordance with the basic program of primary general education, ICT can and should be widely used in assessing the formation of universal educational actions, which are also formed in the process of studying mathematics.	No policy
Gauteng, South Africa	Same as South Africa	
Western Cape, South Africa	Same as South Africa	
Madrid, Spain	Same as Spain	
Abu Dhabi, UAE	Same as United Arab Emirates	
Dubai, UAE	Same as United Arab Emirates	

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