

PRINCIPLES OF MATHEMATICS 12

DESCRIPTION OF THE PROVINCIAL EXAMINATION

The Table of Specifications outlines the curriculum organizers, sub-organizers, and the cognitive level emphases covered on the provincial examination. A detailed description of examinable material within each curriculum organizer will be found in the *Principles of Mathematics 10 to 12: Integrated Resource Package 2006*.

The provincial examination is divided into **two** parts: Part A and Part B.

The examination will contain a non-calculator active section in Part A. Administration of the examination will be as follows:

At the beginning of the examination, students will receive a Multiple-Choice Booklet (Part A) and a Written-Response Booklet (Part B) and two bubble sheets. Students will begin Part A using the first bubble sheet with an approved calculator placed on the floor below their desks.

PART A: Multiple-choice questions worth **73%** of the examination
(44 questions worth 1.5 marks each to give 66 marks).

Section I: The first **16 questions** are to be done without the use of any calculator whatsoever. On the examination, the suggested time for Section I will be **35 minutes**; however, students will be given 45 minutes before they must hand in the first bubble sheet. At the end of the 45 minutes, the first bubble sheets will be collected and students may then place their calculators on their desks and use their calculator for the remainder of the examination session. During the first 45 minutes, students may proceed to other questions on the examination; however, students will not be able to access their calculator until all of the first bubble sheets have been collected at the end of 45 minutes. **There are many questions in the remaining part of the examination that do not require a calculator.** Once the first bubble sheet is handed in, students will not be able to go back to any of these first 16 questions.

Section II: The remaining **28 questions** will contain **some** questions for which a graphing calculator is required. The suggested time for Section II will be **55 minutes**.

PART B: Written-response questions worth **27%** of the examination (24 marks).

There will be **some** questions for which a graphing calculator is required. The suggested time for Part B will be **30 minutes**.

The **number** of written-response questions may vary from one examination to the next, depending on the value of each question; however, the total **marks** for the written-response section will remain the same.

It is essential that students know what quality of response is expected on written-response questions and how they are evaluated on such questions. The intent of the written-response section of the provincial examination is to test logical mathematical development of a solution.

1. Students are expected to communicate their knowledge and understanding of mathematical concepts in a clear and logical manner in all questions. The use of a graphing calculator will affect the way some of the questions are asked and the way students will be expected to answer them. In some cases, a particular method of solution will be requested; in other cases, alternate methods of solution will be accepted. In all cases, students will be expected to show their work and indicate their method of solution or give justification for their written-response answers. Full marks **will not** be awarded

for a correct final answer without evidence of the process used to derive that answer.

2. If, in a justification, a student refers to information generated by a graphing calculator, this information must be presented clearly in the response. If the statistical features of the calculator are used, it is important to show the function with the substitution of the relevant numbers. For example: in part of the solution it is acceptable to show $\text{binomcdf}(20, 0.5, 10)$ or the equivalent syntax for the calculator used.
3. When using the calculator, a student should provide a decimal answer that is **accurate to at least two decimal places** (unless otherwise indicated). “Accurate to at least two decimal places” means that students may present their answer to more than two decimal places, but the answer must be correctly rounded.

The following are some of the acceptable answers for $9/17$:

$9/17$
0.529 411 764 7
0.53
0.529
0.529 41
0.529 412

The following are some of the not acceptable answers for $9/17$:

0.52
0.529 411

Rounding should occur **only** in the final step of the solution.

This examination is designed to be completed in **two hours**. *Students may, however, take up to 60 minutes of additional time to finish.*