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# A Guide for Students Preparing to Write the Diploma Examination

Mathematics 30–1 / Mathematics 30–2



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**This document was written primarily for**

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Students ✓

Teachers

Administrators

Parents ✓

General Audience

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***A Guide for Students Preparing to Write the Diploma Examination  
Mathematics 30-1 / Mathematics 30-2***

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Please note that if you cannot access one of the direct website links referred to in this document, you can find diploma examination-related materials on the [Alberta Education website](#).

This guide has been prepared by Provincial Assessment staff at Alberta Education. We develop the diploma exams and are involved in the assessment of thousands of high school students each year. The purpose of this guide is to provide students with information that will increase their likelihood of success on the math diploma exams.

Guides for Students for diploma-exam subjects other than math, as well as additional materials on how to prepare for diploma exams, can be found on the [Alberta Education website](#).

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## Design of Diploma Exams

Math diploma exams contain multiple-choice, numerical-response, and written-response questions. Multiple-choice questions are worth one mark each and require you to select the best answer from the given choices. Numerical-response questions are worth one mark each and require you to fill in a sequence of numbers or record a calculated value on your answer sheet. Written-response questions are worth five marks each in Math 30-1 and seven marks each in Math 30-2. These questions require you to communicate your understanding of a math concept or apply an algebraic process to solve a problem. In both Math 30–1 and Math 30–2, the multiple-choice/numerical-response part of the exam will count for 75% of the diploma exam mark and the written-response part of the exam will count for 25% of the diploma exam mark.

Additional written-response information for math diploma exams is available online on the [Alberta Education website](#).

The number and types of questions on each mathematics diploma exam are shown in the table below.

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<b>Subject</b>	<b>Number of Multiple-choice Questions</b>	<b>Number of Numerical-response Questions</b>	<b>Total Number of Written-response Questions</b>
Mathematics 30–1	24	8	3
Mathematics 30–2	24	8	2

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Each of these diploma exams is developed to be completed in 3 hours; however, you may take up to 6 hours to complete the exam, if needed.

Special accommodations, such as audio narration or a scribe, are available to some students. For more information, contact your school administration or counselling department.

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## Preparing for Diploma Exams

The best way to prepare to write diploma exams is to start with a positive attitude and establish good study habits. Set yourself up for success at the beginning of the course. Attend class regularly, actively participate in classroom activities, and complete all assignments. The skills and knowledge that you gain in the course are essential to your success on the diploma exam.

Preparation for diploma exams goes beyond memorization of facts. Be prepared to analyze information, interpret data, and apply your knowledge and skills to new contexts. The General Scoring Guides and the Mathematics Directing Words are available to help you become familiar with the requirements of the written-response questions on the exams. The scoring guide for each math course and the list of directing words can be found in [Writing Diploma Exams](#) on the Alberta Education website.

Course-specific multiple-choice and numerical-response sample questions and previous diploma exam questions are available at [Quest A+](#), Alberta Education's online testing site.

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## Exam Day

On exam day, arrive early and get organized. You are responsible for providing your own HB pencil, eraser, and approved graphing calculator for writing diploma exams. No dictionaries, electronic devices, papers, notes, textbooks, or blank paper for rough work are allowed. A ruler, protractor, and highlighter may be used for math exams. A formula sheet is included in the math exam booklet.

Remember to relax and do your best. Mark questions that you cannot immediately answer and come back to them later. Pace yourself and answer every question. You are encouraged to use your exam booklets for planning, calculations, and working through your responses.

Throughout the exam, carefully read the instructions, contexts, and questions. For multiple-choice questions, read the stem of the question and try to formulate an answer to the question in your mind before looking at the four choices given. Some questions are more difficult than others and will require you to choose the best answer among several alternatives that seem plausible. For numerical-response questions, pay close attention to the instructions below the question so that your answers are expressed or rounded appropriately with the correct number of digits. For written-response questions, read each question carefully, noting any bolded directing words.

You are encouraged to try to solve the problems in all parts of each written-response question as an attempt at a solution may be worth partial marks. For full marks, your responses must address all aspects of the question.

During the administration of diploma exams, students are expected to adhere to the rules found at [Writing Diploma Exams](#).

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## Using Calculators

Math diploma exams require the use of an approved graphing calculator. Approved graphing calculators must be properly cleared and configured before AND after each diploma exam by the diploma exam supervisor. The calculator policy, calculator criteria, and keystrokes required for clearing approved calculators can be found in the [Calculator Information and Rules for Mathematics and Science Diploma Exams](#) on the Alberta Education website.

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## Rescores and Rewrites

You may request a rescoring of your exam. **Keep in mind that if you do request a rescore, the mark resulting from the rescore will be your final exam mark**, even if it is lower than the original mark. Follow the procedures included with your Diploma Exam Results Statement to apply for a rescore.

You may choose to rewrite a diploma exam during regularly scheduled writing sessions. If you rewrite a diploma exam, the highest mark you achieve will be shown on your transcript and used to determine your final mark.

Math diploma exams are offered during the following writing sessions:

Subject	Writing Sessions
Mathematics 30–1	November, January, April, June, August
Mathematics 30–2	November, January, April, June, August

Information on rewrites and rescors, including deadlines, forms, and fees, can be found in the [General Information Bulletin](#) on the Alberta Education website.

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## Exam Weighting

Your school-awarded mark is worth 70% of your final mark in any course that has a diploma exam. The diploma exam mark is worth the remaining 30% of your final mark.

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## Exam Difficulty

All exams in a given subject are built to the same blueprint specifications and standards for difficulty, regardless of when they might be administered.

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## Curriculum Coverage

Each diploma exam is based on the program of studies for that course. Learning the knowledge and skills outlined in the program of studies will prepare you for your diploma exam.

Although it is often impossible to cover every single outcome in a program of studies on one test, every effort is made to cover as much of it as possible, with the focus on applying your knowledge and skills to contexts that might be new to you. The understanding you gained in class will have prepared you to integrate your knowledge and skills with the new context so that you can answer the question.

You should read each context box carefully, because the information is necessary to correctly answer the question.

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## Exam Development

### New questions

Some of the questions on a diploma exam have been administered on a previous exam. These questions serve as anchor items, which allow exams administered at different writing sessions to be compared to each other. The remaining questions are being administered for the first time.

### Mistakes in exams?

Diploma exams are developed and reviewed thoroughly and meticulously to very high standards. Should an error occur on a diploma exam, various steps can be taken to address the error. In such rare cases, every effort is made to ensure fairness to students.

### Trick questions?

There are no questions on diploma exams that are designed to trick you.



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# Answering Questions

## Multiple-choice strategy

A good strategy is to read the question and determine the answer for yourself before you look for the answer among the multiple-choice alternatives. If you are having difficulty deciding between two alternatives, it might be best to read the question over again and try to analyze where you might have made an error. The longest answer is not necessarily the correct answer.

## Erasing an answer

Although the scanning machines are generally able to differentiate between erased marks and intended marks, it is always in your best interests to erase completely. If you feel that incompletely erased marks may have affected your results, you can request a rescore.

For written-response questions, your responses must be presented in a well-organized manner. Responses that you change or do not want to be marked should be erased completely or crossed out.

## Rounding an answer

You should always follow the rounding rules appropriate to mathematics, and read and follow the instructions below each numerical-response question carefully. You should retain all decimals throughout your calculation and only round your final answer.

## Negative answers

In numerical-response questions, the negative sign will precede the response blank if the correct answer is a negative number.

If there is no negative sign in front of the blank and you get a negative answer, read the context of the question over again and try to analyze where you might have made an error.

## More than one answer

Multiple-choice questions have only one correct answer. Sometimes, you will need to choose the best answer among several that seem plausible. Some, but not all, numerical-response questions have more than one correct answer, but you only need to provide one correct answer to receive the mark for that question.

## When time is up

You are not allowed to fill in bubbles after time is up. Make sure that you have filled in the bubbles on the answer sheet before the end of the exam administration time.

## Written-response questions

Some written-response questions will ask for a demonstration of algebraic skills while others will ask for an explanation of math concepts or a justification. All responses must be presented in a well-organized manner and must include pertinent ideas, calculations, formulas, and correct units where applicable.

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## Registering

### How to register

If you are taking a diploma exam course through an accredited Alberta high school, then your school will register you to write the exam. Alternatively, you can register to write or rewrite a diploma exam using the self-service website [myPass](#). Some diploma exam sessions require students to pre-register and do not allow students to just walk in and write the exam. Specific rules regarding which sessions and exam-writing centres allow unregistered writing can be found in the [General Information Bulletin](#) on the Alberta Education website.

### Mature students

A mature student is a person 19 years of age or older as of September 1 of the current school year, or who already holds a high-school diploma from the Province of Alberta or an equivalent high school diploma.

If you are a mature student, you may write a diploma exam without taking the course. You may write the exam in any writing session, but you must register online with [myPass](#) before the deadline. The registration deadline varies depending on the writing session you select. You should also decide where you will write the exam. Then speak to the principal of the high school or staff at the exam-writing centre to reserve a space and make sure an exam is available for you.

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## In the Exam Room

### What you can bring

In addition to an HB pencil, pen, eraser, and highlighter, you may bring one approved calculator, a ruler, and a protractor into the exam room.

### What you can't bring

You are not allowed to bring in print materials, including papers, notes, books, a dictionary, a thesaurus, or blank paper for rough work, and you are not allowed to bring in electronic devices, including audio players, cellphones, headphones, wearable electronics, or other devices.

Cellphones are not permitted in the exam room. If you are in possession of a cellphone, even if it is turned off, or any other unauthorized materials, your diploma exam results could be invalidated.

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## Accommodations

Accommodations for diploma exams, other than extra time, are ordered, reviewed, and managed at the school level. Accommodations that involve physical materials must be formally requested using an order form that must be submitted before a deadline. Be sure to make these arrangements well in advance of your diploma exam. Consult your school counsellor or principal for more information.

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## Marking and Rewrites

The multiple-choice and numerical-response questions on math diploma exams are machine scored. Written-response items are scored by math teachers during scheduled marking sessions. Rescores are hand scored by staff in the Provincial Assessment Sector of Alberta Education.

There is no penalty for rewriting a diploma exam. Regardless of the number of times you write a diploma exam, your highest mark will be the one that is on your official transcript.

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## Samples of Previous Exams

Some questions that have appeared on previous diploma exams are available both on [Quest A+](#), Alberta Education's online testing site, and on the [Alberta Education website](#) as "Released Items" and "Exemplars."

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## For More Information

More-detailed information about math diploma exams can be found in the subject-specific information bulletins, which are available on the [Alberta Education website](#).

### Contact

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