# DEFINITION OF THE EVALUATION DOMAIN FOR SANCTION AND RECOGNITION

**Course**

***Geometric Representations***

**MTH-P104-4**

**Common Core Basic Education Program**

***Mathematics***

**May 2017**

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# Introduction

The Definition of the Evaluation Domain (DED) ensures consistency between a course and the related evaluation instruments. It serves to select, organize and describe the essential and representative elements of the course. The DED is based on the program of study and on the course, but should by no means replace these in the planning of instructional activities.

The DED is the reference document that ensures the validity of examinations across the province[1]. This document serves as a framework for developing multiple equivalent versions of an evaluation instrument.

The DED for each ministerial examination is developed by the *ministère de l'Éducation, du Loisir et du Sport* (MELS). The DED for other types of examinations is developed either by MELS or, at the request of the school boards, the Société GRICS (BIM). For ethical reasons, only those responsible for developing Definitions of the Evaluation Domain can modify their content.

Examinations developed by the MELS conform to the content of their respective DEDs. It is recommended all other examinations be in agreement with the DEDs.

[1] Québec, Ministère de l'Éducation du Québec, *Policy on the Evaluation of Learning* (Québec: Gouvernement du Québec, 2003), 47.

# Evaluation Content

## General Information

**Broad Areas of Learning**

- Health and Well-Being
- Environmental and Consumer Awareness
- World of Work
- Citizenship

**Subject Area**

- Mathematics, Science and Technology

**Class of Situations**

- Representing the physical environment

**Program of Study**

- Mathematics

**Course**

- Geometric Representations MTH-P104-4

## Essential Elements Targeted by the Evaluation

**Competency**

- Addressing a real-life situation pertaining to the class of situations targeted by the course.

**Categories of Essential Knowledge**

- Plane figures
- Measurements
- Decimals and ratios
- Proportional relationships

## Evaluation Criteria and Weighting

**Evaluation Criteria for the Competency**

Perceiving the physical environment appropriately (30 %)

Producing clear and appropriate representations of the physical environment (25 %)

Determining measurements and ratios with precision (25 %)

**Proficiency in Mathematical Knowledge**

The proficiency in mathematical knowledge presumes its acquisition, understanding, application and mobilization. In this way, mathematical knowledge and the evaluation criteria for the competency are interdependent*.

***** Explicit evaluation of mathematical knowledge (20 %)

# Explanation of the Evaluation Content

## Evaluation Criteria

The evaluation criteria are formulated exactly as in the course.

## Information Clarifying the Evaluation Criteria

Perceiving the physical environment appropriately

This criterion measures the student's capacity to:

- decode the symbols, notations and terms associated with arithmetic and geometric language;
- make connections between figures, measurements ratios and the objects they represent;
- deduce implicit information in representations of the physical environment using the properties of simple geometric figures;
- identify shapes and quantities.

Producing clear and appropriate representations of the physical environment

This criterion measures the student's capacity to:

- select the geometric shapes that most closely resemble reality;
- construct geometric shapes using appropriate techniques;
- indicate measurements using the International System of Units;
- use mathematical models to structure their message.

Determining measurements and ratios with precision

This criterion measures the student's capacity to:

- perform operations on ratios and decimals;
- take measurements with precision;
- indicate measurements which adhere to the International System of Units;
- determine ratios or measurements by deducing them directly from a given representation.

## Proficiency in Mathematical Knowledge

The evaluation of mathematical knowledge is accomplished by way of evaluating the competency with the help of tasks related to the evaluation criteria.

For this course, the evaluation of some mathematical knowledge is done explicitly.

## Weighting

The weighting assigned to the evaluation of the competency is 80 %. The weighting assigned to the explicit evaluation of mathematical knowledge is 20 % (see the distribution of these percentages in the table).

These weightings were established in order to emphasize the evaluation of the competency in dealing with a situation, and as a function of the complexity and the importance of the associated knowledge.

## Knowledge

Essential knowledge targeted for the evaluation of the competency are many, in the course MTH-P104, under the label *New compulsory knowledge* for the following categories:

- Plane figures
- Measurements
- Decimals and ratios
- Proportional relationships

It is recommended that approximately half of the essential knowledge be the object of evaluating mobilized essential knowledge, and that approximately a quarter of the essential knowledge be the object of explicit evaluation.

# Specifications for the Evaluation Instruments

## Examination: Number of Parts, Sections, Procedures and Duration

The examination is comprised of only one part, divided into two sections. These sections are included in the same booklet and may be administered over a single session.

Should the examination take place over the course of two sessions, it is imperative to separate it into two distinct booklets in order to preserve its confidentiality.

Total length of the evaluation: 2 hours and 30 minutes
Section – *Explicit Evaluation of Mathematical Knowledge*: 30 minutes
Section – *Evaluation of Mobilized Mathematical Knowledge*: 2 hours

## Examination Content

Section – *Explicit Evaluation of Mathematical Knowledge*
The tasks to be performed by the student in the section *Explicit Evaluation of Mathematical Knowledge* consist of answering questions leading to short answers or more developed answers.

Section – *Evaluation of Mobilized Mathematical Knowledge*
The tasks to be performed by the student in the section *Evaluation of Mobilized Mathematical Knowledge* are problems to be solved, presented in one or more real-life situations associated with representing the physical environment.

## Information-Gathering Tools

Section – *Explicit Evaluation of Mathematical Knowledge*
The adult answers questions which lead to short answers and more developed answers.

Section – *Evaluation of Mobilized Mathematical Knowledge*
The adult solves problems contextualized in real-life situations.

## Authorized Materials

For both sections of the examination

- Regular or scientific calculator
- Geometry set
- A memory aid

  Specifications:

  - The memory aid, prepared by the adult learner, must not exceed one $8\frac{1}{2} \times 11$ inch single-sided sheet of paper. It may be handwritten or typed (minimum 12-point font; single-spaced) and must be approved by the teacher.
  - Mathematical formulas and examples prepared by the adult learner are permitted on the memory aid.

## Assessment Tools

Section – *Explicit Evaluation of Mathematical Knowledge*

- An answer key

Section – *Evaluation of Mobilized Mathematical Knowledge*

- An answer key
- An evaluation grid based on criterion-referenced interpretation which makes use of a descriptive scale with five levels

## Pass Mark

The pass mark is 60 % for the examination as a whole.

## Retakes

The adult must retake the entire examination in a different version.