

# Apprenticeship and Certification Study Guide



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## Introduction

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This Study Guide has been developed by the Newfoundland and Labrador Department of Education and Early Childhood Development, Apprenticeship and Trades Certification Division, to assist apprentices and trade qualifiers as they prepare to write the Red Seal Exam. Red Seal Exams are available for all Red Seal trades. For a list of Red Seal trades please refer to the Department of Education and Early Childhood Development website: <https://www.gov.nl.ca/atcd/designated-trades/list-of-designated-trades/>

### Some of the specific goals of this guide are:

- ⇒ to help you understand the skills and knowledge that might be covered on the exam
- ⇒ to help you identify your strengths and weaknesses
- ⇒ to provide organization and structure for a course of study
- ⇒ to provide a list of resources to help you with your study plan
- ⇒ to support and supplement the teaching and learning process

This study guide outlines the theoretical portion of the program. The intent is not to replace technical training provided under the guidance of instructors. Rather, it is a tool to be used in conjunction with formal training.



## Exam Process

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### Before the Exam

You must contact the nearest Apprenticeship and Trades Certification Divisional office to make request to write the Red Seal exam (*See Appendix A for a list of regional offices*). Upon approval, the Apprenticeship Program Officer (APO will notify you of your eligibility to write the exam, and provide you with scheduling information. If you require special accommodations due to a disability or language barrier, please contact your regional office for information on applying for this service.

### During the Exam

**You must bring:**

- personal identification such as a photo or signature ID or valid Newfoundland and Labrador driver's license
- your notification letter

**The following will be provided:**

- a calculator (*see Appendix B for calculator information*)
- all other items required such as pencils, scrap paper, etc.

**Important Note:**

Personal cell phones, calculators, or other electronic equipment are NOT allowed into the exam room. If you do bring them, they will be stored away and returned to you when you have completed the exam.

### After the Exam

Results will be mailed to you approximately seven to ten days after completion of the exam. All necessary instructions and information will be provided in the results letter.

The percentage mark you obtained will be provided. You will also be given a section by section breakdown, showing how many questions were in each section, as well as the number of questions in each section you completed successfully.

If you are successful in obtaining a 70% or more on your exam, you will be issued a Newfoundland and Labrador Certificate of Qualification with a Red Seal endorsement.

## Exam Format

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All Red Seal exams are written in multiple-choice format. Each exam has between 100 and 150 questions. A multiple choice question consists of a stem (a complete question followed by four options (A, B, C, D). The stem contains all the information necessary to answer the question. The options consist of the one correct answer and three “distracters.” Distracters are incorrect. (See Appendix C for a sample answer sheet).

Red Seal exams contain three types of questions:

### Level 1 Knowledge and Recall

Questions at this level test your ability to recall and understand definitions, facts, and principles.

### Level 2 Procedural and Application

Questions at this level test your ability to apply your knowledge of procedures to a new situation.

### Level 3 Critical Thinking

Questions at this level test your ability to interpret data, solve problems and arrive at valid conclusions.

#### Level 1 Examples:

1. When using a powder-activated tool, what is done if a cartridge misfire occurs?
  - A. Quickly and carefully eject the cartridge.
  - B. Eject the cartridge after 5 seconds and dispose in water.
  - C. Keep the tool in place, wait 30 seconds and re-fire the tool.
  - D. Keep the tool in place and continue to re-fire.



2. What is the best suited fastening device to use when applying a stop block to a jig?

- A. Toggle clamp.
- B. Screw and glue.
- C. Screw and brad.
- D. Brad and staple.



3. What is used to prevent miter joints from opening?

- A. Air-dried lumber and biscuits.
- B. Biscuits and silicone.
- C. Air-dried lumber and sufficient glue.
- D. Kiln-dried lumber and sufficient glue.



### Level 2 Examples:

1. What are the initial steps required when machining a haunched mortise and tenon joint on a prototype?

- A. Drill holes and clean mortise.
- B. Cut the cheeks and shoulders.
- C. Machine the tenon then mortise.
- D. Machine mortise then the tenon.



2. Which sequence of cutters and cutting operations is used on a tenoner when coped shoulders are required?
- A. Coping heads, tenon heads, cutoff saw.
  - B. Cutoff saw, tenon heads, coping heads.
  - C. Tenon heads, coping heads, cutoff saw.
  - D. Coping heads, cutoff saw, tenon heads.



3. On a multi-spindle dovetailing machine, what will lowering the cutters by 1 mm do?
- A. It will change the pitch on the cutters.
  - B. It will allow longer pins and tails to be made.
  - C. It will allow different thicknesses of stock to be dovetailed.
  - D. It will make a looser joint at the pins and tails.



### Level 3 Examples:

1. Which combination of edges and application procedure is most suitable when putting an edge on a shop-made countertop?
- A. T-molding, plastic or vinyl; with a groove.
  - B. Aluminum, stainless steel or galvanized; with a groove.
  - C. Crown molding, half round molding or cove molding; with glue and nails.
  - D. Solid surface, plastic laminate or solid wood; with suitable glue.



2. What could result from excessive pressure being applied when contact cementing plastic laminate to the face of a fir plywood core?
- A. The core may fracture on the face.
  - B. The glue may be starved and delaminate.
  - C. Telegraphing may occur across the face.
  - D. De-lamination may occur at the edges.



3. What is the procedure to apply plastic laminate and solid profiled edge to a doubled-up particle top for a kitchen counter?
- A. Glue plastic laminate, trim and glue edge then profile.
  - B. Profile edge, glue plastic laminate, trim and apply profile edge.
  - C. Glue solid edge, glue plastic laminate and profile edge and plastic laminate.
  - D. Glue solid edge, profile, glue plastic laminate then trim.



**Source of Questions:**

<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=37>

## Exam Content

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### Understanding the *Red Seal Occupational Standard (RSOS)*

The Red Seal model has historically been based on the development of the National Occupational Analysis (NOA) which supports the development of multiple-choice format examinations.

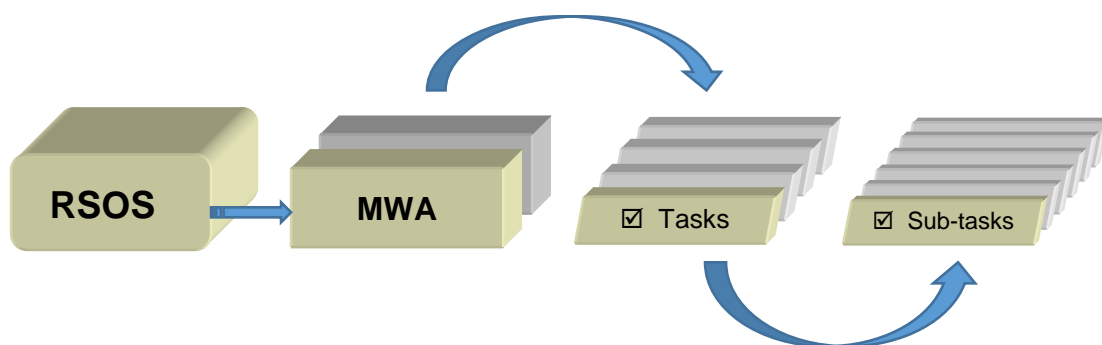
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

The new standards provide greater consistency in learning resources and allow for increased industry involvement in the development of these standards. This new model places increases emphasis on apprenticeship training and assessing skills with industry learning objectives, outcomes and performance criteria.

The RSOS for each trade describes the tasks and sub-tasks; skills and knowledge requirements; summary of essential skills; safety information; trends affecting the trade; technical terms; names of tools and equipment; acronyms; learning objectives and outcomes; industry expected performance and essential skills related to each sub-task.

The RSOS is an excellent tool to use as you study for the Red Seal exam. RSOSs can be found at <http://www.red-seal.ca/resources/n.4.1-eng.html>

RSOS material is organized into the following categories: **MWA (Major Working Activity)**. The MWAs are further broken down into **TASKS** (*describes activities within an MWA*) and **SUB-TASKS** (*describe activities within a task – This is what the exam is based on*).

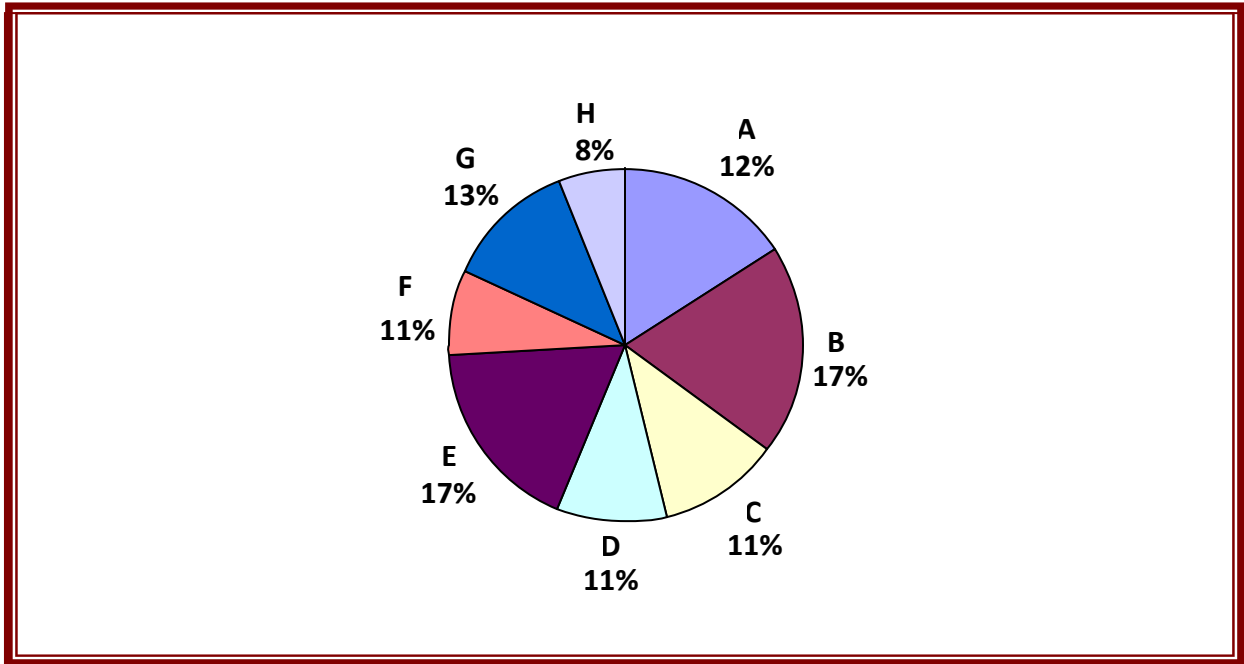


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

## RSOS Pie Chart

The RSOS Pie Chart presents the MWA percentages in the form of a pie chart which tells you the approximate number of questions from each MWA. For example, 12% of the questions on the **Cabinetmaker** Exam will be based on **MWA A**.

**CABINETMAKER**



MWA Titles			
<b>MWA A</b>	Performs Common Occupational Skills	<b>MWA E</b>	Performs Shop Assembly
<b>MWA B</b>	Performs Machining	<b>MWA F</b>	Performs Finishing
<b>MWA C</b>	Performs Forming and Laminating	<b>MWA G</b>	Performs On-Site Assembly & Installation
<b>MWA D</b>	Installs Veneers and Laminates	<b>MWA H</b>	Performs Specialized Operations

## Exam Breakdown

The **Cabinetmaker** exam currently has 120 questions. The following table shows a breakdown of the number of questions that come from each RSOS MWA. It is important to note that the exact number of questions can change at any time. When you are ready to write your exam, you may contact your regional office to verify the number of questions (See Appendix A).

		# of Questions
<b>MWA A</b>	<b>Performs Common Occupational Skills</b>	<b>16</b>
<b>Task 1</b>	Performs safety-related functions	2
<b>Task 2</b>	Maintains tools and equipment	4
<b>Task 3</b>	Organizes work	4
<b>Task 4</b>	Performs routine work practices	4
<b>Task 5</b>	Uses communication and mentoring techniques	2
<b>MWA B</b>	<b>Performs Machining</b>	<b>19</b>
<b>Task 6</b>	Machines components using stationary and portable power tools	14
<b>Task 7</b>	Machines components using automated and CNC equipment	5
<b>MWA C</b>	<b>Performs Forming and Laminating</b>	<b>13</b>
<b>Task 8</b>	Creates curved components using wood and composite materials	6
<b>Task 9</b>	Laminates wood and composite materials	7
<b>MWA D</b>	<b>Installs Veneers and Laminates</b>	<b>14</b>
<b>Task 10</b>	Applies veneers	7
<b>Task 11</b>	Applies laminate sheets	7
<b>MWA E</b>	<b>Performs Shop Assembly</b>	<b>20</b>
<b>Task 12</b>	Assembles cabinets and furniture	11
<b>Task 13</b>	Assembles architectural millwork products	9
<b>MWA F</b>	<b>Performs Finishing</b>	<b>14</b>
<b>Task 14</b>	Prepares surface for finishing	7
<b>Task 15</b>	Finishes wood products	7
<b>MWA G</b>	<b>Performs On-Site Assembly and Installation</b>	<b>15</b>
<b>Task 16</b>	Modifies products to site conditions	4
<b>Task 17</b>	Installs cabinets and countertops	6
<b>Task 18</b>	Installs architectural millwork products and moldings	5
<b>MWA H</b>	<b>Performs Specialized Operations</b>	<b>9</b>
<b>Task 19</b>	Builds stairs and balustrades	3
<b>Task 20</b>	Works with solid surface material and custom countertops	3
<b>Task 21</b>	Creates decorative woodwork	1
<b>Task 22</b>	Restores woodwork	2
<b>Total</b>		<b>120</b>

## RSOS Sub-tasks

The following *RSOS Task Profile Checklist* outlines the MWAs, tasks and sub-tasks for your trade. The Red Seal exam is written to test your knowledge and abilities regarding the sub-tasks in the RSOS. This chart can be used to review your current knowledge. You can review by placing a checkmark (✓) next to those you understand fully.

Place your focus on those you do not understand and study them until you are comfortable with the material. Think of possible questions in that particular content area.

The RSOS also contains a list of “supporting knowledge and abilities” for each sub-task. They are the skills and knowledge you must have to perform a sub-task. The supporting knowledge and abilities identified under each sub-task will be very helpful as you review. The list can be found in the RSOS for your trade.

**Task Profile Checklist  
Based on RSOS 2021  
Cabinetmaker**

**MWA A: Performs Common Occupational Skills**

**Task 1: Performs safety-related functions**

**Sub-Tasks**

- Maintains safe work environment
- Uses personal protective equipment (PPE) and safety equipment

**Task 2: Maintains tools and equipment**

**Sub-Tasks**

- Maintains hand, portable power and pneumatic tools and equipment
- Maintains stationary power tools
- Maintains automated and computer numerical control (CNC) equipment
- Maintains finishing equipment

**Task 3: Organizes work**

**Sub-Tasks**

- Interprets prints and drawings
- Plans project
- Creates design
- Performs layout of cabinets, furniture and architectural millwork

**Task 4: Performs routine workpractices**

**Sub-Tasks**

- Handles materials, supplies and products
- Fabricates jigs and templates
- Builds prototypes
- Dry fits components
- Selects hardware
- Selects adhesives and fasteners

**Task 5: Uses communication and mentoring technique**

**Sub-Tasks**

- Uses communication techniques
- Uses mentoring techniques

## MWA B: Performs Machining

### Task 6: Machines components using stationary and portable power tools

#### Sub-Tasks

- Breaks out solid wood
- Dresses solid wood
- Shapes solid wood
- Breaks out sheet materials
- Machines sheet materials
- Machines joints
- Performs preliminary sanding

### Task 7: Machines components using automated and CNC equipment

#### Sub-Tasks

- Sets up automated and CNC equipment
- Operates automated and CNC equipment

## MWA C: Performs Forming and Laminating

### Task 8: Creates curved components using wood and composite materials

#### Sub-Tasks

- Builds forms
- Performs curved laminating
- Steam-forms wood

### Task 9: Laminates wood and composite materials

#### Sub-Tasks

- Arranges materials for laminating
- Applies adhesive for laminating
- Clamps pieces together

## MWA D: Installs Veneers and Laminates

### Task 10: Applies veneers

#### Sub-Tasks

- Selects veneers
- Prepares veneers and substrate
- Adheres veneers to substrates
- Performs final clean-up of veneered panels

### Task 11: Applies laminate sheets

#### Sub-Tasks

- Selects laminate sheets
- Prepares laminate sheets and substrate
- Adheres laminate sheets to substrate
- Performs final clean-up of laminated sheets

## MWA E: Performs Shop Assembly

### Task 12: Assembles cabinets and furniture

#### Sub-Tasks

- Assembles cabinet components
- Assembles furniture components
- Combines cabinets and furniture components into final assemblies

### Task 13: Assembles architectural millwork products

#### Sub-Tasks

- Assembles architectural millwork components in shop
- Assembles architectural fixtures in shop

## MWA F: Performs Finishing

**Task 14: Prepares surface for finishing**

**Sub-Tasks**

- Repairs imperfections
- Prepares parts for finishing
- Performs final sanding of surfaces

**Task 15: Finishes wood products**

**Sub-Tasks**

- Prepares finishing materials
- Applies finishing material manually
- Sprays on finishing material

## MWA G: Performs On-Site Assembly and Installation

**Task 16: Modifies products to site conditions**

**Sub-Tasks**

- Cuts access holes on site
- Scribes product to fit on site

**Task 17: Installs cabinets and countertops**

**Sub-Tasks**

- Performs final on-site assembly and fastening of cabinets and countertops
- Finalizes installation of cabinets and countertops

**Task 18: Installs architectural millwork products and mouldings**

**Sub-Tasks**

- Performs final on-site assembly and fastening of architectural millwork products
- Installs mouldings
- Finalizes installation of architectural millwork products and mouldings

## MWA H: Performs Specialized Operations

**Task 19: Builds stairs and balustrades**

*Sub-Tasks*

- Lays out stair and balustrade components
- Machines stair and balustrade components
- Assembles stairs and balustrades
- Installs stairs and balustrades

**Task 20: Works with solid surface material and custom countertops**

*Sub-Tasks*

- Breaks out materials
- Fabricates solid surface material
- Installs solid surface material

**Task 21: Creates decorative woodwork**

*Sub-Tasks*

- Performs marquetry (**NOT COMMON CORE**)
- Performs carving (**NOT COMMON CORE**)
- Performs woodturning

**Task 22: Restores woodwork**

*Sub-Tasks*

- Repairs woodwork for restoration purposes
- Refinishes woodwork

## Create a Study Plan

As you prepare for your exam, it is important to plan a schedule. The following two tables will help you stay on track.

The first table is a **“Weekly Study Plan.”** In this table list the areas you will focus your study for each day. You should include items you need to review as well as items you need to study. Remember, more time will be needed for study in areas you find difficult, whereas you may only require review in areas you are more familiar with. As you work through the RSOS sub-task list you can start to fill in this table.

The second table is a **“Study Time Table.”** It is important to create a study schedule where you determine the best days of the week and times of day for you to study.

Print several copies of these tables and fill out for each week of study. It is important to stick to your study schedule.

**Weekly Study Plan for Week of:** \_\_\_\_\_

	Area of Study 1	Area of Study 2	Area of Study 3	Area of Study 4	Area of Study 5	Area of Study 6
Mon.						
Tues.						
Wed.						
Thu.						
Fri.						
Sat.						
Sun.						

**Study Time Table for Week of:** \_\_\_\_\_

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00 AM - 9:00 AM							
9:00 AM - 10:00 AM							
10:00 AM - 11:00 AM							
11:00 AM - 12:00 Noon							
12:00 Noon - 1:00 PM							
1:00 PM - 2:00 PM							
2:00 PM - 3:00 PM							
3:00 PM - 4:00 PM							
4:00 PM - 5:00 PM							
5:00 PM - 6:00 PM							
6:00 PM - 7:00 PM							
7:00 PM - 8:00 PM							

## Resources - Websites

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Study information can be drawn from a variety of sources. A sample list of study materials (websites and books) is provided below. These and other helpful resources may be found in a local college bookstore, on the Internet, or at your place of employment. You may also be able to borrow them from an apprentice or journey person in your trade.

### Study Strategies and Exam Preparation Guide

The *Study Strategies & Exam Preparation Guide* is meant to be used in conjunction with this study guide. It provides direction and information on such areas as study habits, test preparation and test taking techniques.

<https://www.gov.nl.ca/atcd/files/Study-Strategies-and-Exam-Prep-Guide-October-2023.pdf>

### Plan of Training (POT)

A *Provincial Plan of Training* details the full scope of learning for a particular occupation, including both technical training competencies and industry experiences necessary to write a Red Seal exam (and complete the requirements for Red Seal Certification, or to write a provincial examination. The POT is based on the RSOS.

<https://www.gov.nl.ca/atcd/designated-trades/pots-aacs/>

### Red Seal Website

**Red Seal** is a program that sets common standards to evaluate the skills of tradespeople across Canada. It is a partnership between the Federal Government and the provinces/territories.

The Red Seal model has been based on the National Occupational Analyses (NOA) which supports the development of multiple-choice examinations. A new Red Seal Occupational Standard (RSOS) was introduced in 2015 and is taking the place of the NOA.

<http://www.red-seal.ca/>

### Cabinetmaker PRACTICE Exam

This is **NOT** a Red Seal exam. This is a practice exam provided by the Red Seal Occupational Standards Program. It was developed using similar question types to that of a Red Seal exam. The exam is intended to be used for self-assessment in preparation for writing a Red Seal Exam.

<https://www.red-seal.ca/eng/s.1mpl.2.2x.1mQ.5.2st.3.4ns.shtml?tid=37#>

### Red Seal Exam Self-Assessment Guide

Use this self-assessment tool to rate your own understanding and experience with the tasks of the trade that are on the Red Seal examination:

[https://www.red-seal.ca/\\_conf/assets/custom/docms/cabinetmaker/self-assessment.pdf](https://www.red-seal.ca/_conf/assets/custom/docms/cabinetmaker/self-assessment.pdf)

### Acronyms

The Red Seal website lists Acronyms which will be helpful in preparing for your Exam!

<https://www.red-seal.ca/eng/trades/cabinetmakers/app-a.shtml>

### Tools and Equipment

The Red Seal website also lists Tools and Equipment which will be helpful in preparing for your Exam!

<https://www.red-seal.ca/eng/trades/cabinetmakers/app-b.shtml>

### Glossary of Terms

The Red Seal website also lists a Glossary of Terms which will be helpful in preparing for your Exam!

<https://www.red-seal.ca/eng/trades/cabinetmakers/app-c.shtml>

## Resources – Book List

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You can use this list to help you obtain information on specific topics. However, it is not necessary to use these books specifically.

- Modern Cabinetmaking*, Goodheart-Willcox, 2005, Davis, C.W., and Umstattd, W.D., ISBN 1590703766
  
- Cabinetmaking Modules, Periods 1-4*, Crown Publication, [www.crownpub.bc.ca](http://www.crownpub.bc.ca)

## Disclaimer

Various external resources (websites, textbooks) have been listed in this study guide to assist an individual in preparing to write a Red Seal Exam. This does not mean the Department of Education and Early Childhood Development, Newfoundland and Labrador endorses the material or that these are recommended as the best resources. There may be other resources of equal or greater value to an individual preparing for a Red Seal exam. The Department of Education and Early Childhood Development has no control over the content of external textbooks and websites listed, and no responsibility is assumed for the accuracy of the material.

## Conclusion

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We hope this guide has provided you with some useful tools as you prepare for your Red Seal exam. If you have any questions regarding your Red Seal exam please contact your regional office (*see Appendix A for a list of regional offices*).

We appreciate your comments and feedback regarding the usefulness of this study guide. If you have any comments or suggestions, we welcome your feedback. The feedback form at the end of this guide can be used for this purpose.

## Appendix A: Regional Offices

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If you have any questions regarding your Red Seal exam, please contact one of the following regional offices:

Department of Education and Early Childhood Development

Apprenticeship and Trades Certification Division

Toll Free: 1-877-771-3737

<https://www.gov.nl.ca/atcd/contact-us/staff-listing-and-office-locations/>

### Corner Brook

1-3 Union Street  
Aylward Building, 2<sup>nd</sup> Floor  
Corner Brook, NL A2H 5M7

Telephone: (709) 637-2366

Facsimile: (709) 637-2519

### Grand Falls-Windsor

42 Hardy Avenue  
Grand Falls-Windsor, NL  
A2A 2J9

Telephone: (709) 292-4215

Facsimile: (709) 292-4502

### Clarenville

45 Tilley's Road  
Clarenville, NL  
A5A 1Z4

Telephone: (709) 466-3982

Facsimile: (709) 466-3987

### St. John's

P.O. Box 8700  
1170 Topsail Road  
Mount Pearl, NL A1B 4J6

Telephone: (709) 729-2729

Facsimile: (709) 729-5878

### Happy Valley-Goose Bay

163 Hamilton River Road  
Burse Building  
Happy Valley-Goose Bay, NL  
A0P 1E0

Telephone: (709) 896-6348

Facsimile: (709) 896-3733

### Wabush

1D Grenfell Drive  
P.O. Box 160  
Wabush, NL  
A0R 1B0

Telephone: (879) 382-1920

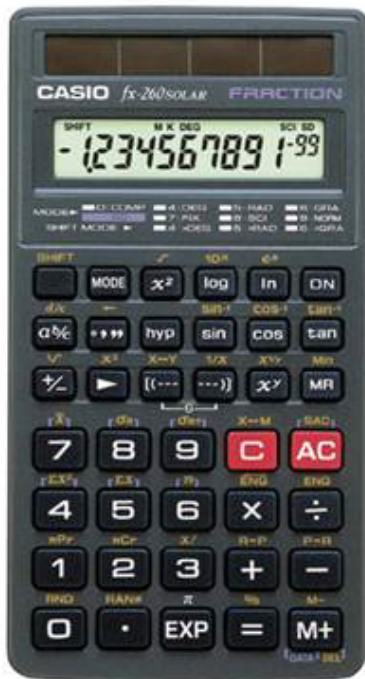
Facsimile: (709) 282-3007

## Appendix B: Calculator Use

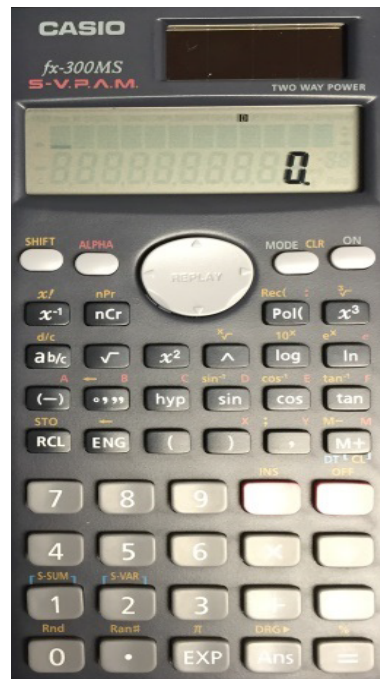
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The picture below shows a calculator with the same functions as the one you will be provided with during your exam. It is advisable to borrow or purchase one with similar functions so that you can familiarize yourself with it before you write your exam.

**Casio FX-260**



**Casio FX-300 MS**





## Feedback Form

### Study Guide – Cabinetmaker

Please answer the following:

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- (1) This Study Guide is a useful tool for exam preparation.  
 strongly agree     agree     disagree     strongly disagree
- (2) The topics contained in the guide are arranged in a logical order.  
 strongly agree     agree     disagree     strongly disagree
- (3) The design and format of the guide caught my attention.  
 strongly agree     agree     disagree     strongly disagree
- (4) The instructions throughout the guide are clear and to the point.  
 strongly agree     agree     disagree     strongly disagree
- (5) The resources listed in this guide are suitable and valuable.  
 strongly agree     agree     disagree     strongly disagree
- (6) The guide should contain more information.  
 strongly agree     agree     disagree     strongly disagree

Suggested information/resources to include:

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Additional Comments:

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**Please complete this form and return via fax or mail to the following:**

Department of Education and Early Childhood Development  
Apprenticeship and Trades Certification Division  
Standards and Curriculum Unit  
45 Tilley's Road, Clarenville, NL A5A 1Z4  
Fax: (709) 466-3987

Department of Education and Early Childhood Development  
Apprenticeship and Trades Certification Division

