

Apprenticeship and Certification Study Guide



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Introduction

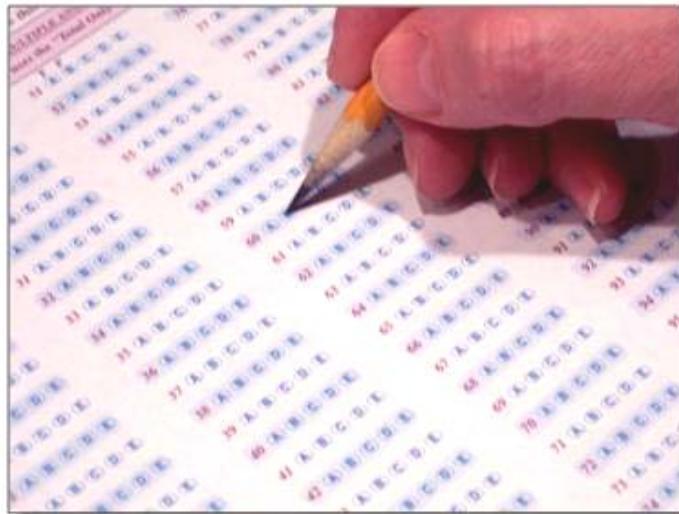
This Study Guide has been developed by the Newfoundland and Labrador Department of Education and Early Childhood Development, Apprenticeship and Trades Certification Division, to assist apprentices and trade qualifiers as they prepare to write the Red Seal Exam. Red Seal Exams are available for all Red 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

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.

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*)
- National Building Code of Canada
- 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

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.

On the following pages, examples of each of the three types of questions are provided.

Level 1 Examples:

1. Which tool is best suited for transferring a 35° angle from a drawing to a shop project?

- A. Try square.
- B. Sliding T-bevel.
- C. Framing square.
- D. Combination square.



2. What should be placed on top of a concrete foundation wall to isolate the bottom plate from the concrete?

- A. Sill gasket.
- B. Filler strip.
- C. Continuous bead of caulking.
- D. 25 mm (1") of rigid insulation.



3. What is the minimum length a scaffold plank must overhang the scaffold transom at each end?

- A. 125 mm (5")
- B. 150 mm (6")
- C. 175 mm (7")
- D. 200 mm (8")



Level 2 Examples:

1. What is the first thing that should be done before using a pneumatic tool?
 - A. Drain the water from the compressor.
 - B. Drain the oil from the compressor
 - C. Put a couple of drops of oil into the tool where the air hose attaches.
 - D. Put a couple of drops of water into the tool where the air hose attaches.



2. What should be done when entering a new worksite?
 - A. Workers should avoid all hazardous areas.
 - B. Workers should dress for the hazards encountered.
 - C. Workers must be trained how to use their personal protective equipment.
 - D. Workers must properly wear all personal protective equipment required.



3. What should be done to fill small gaps in an insulated concrete form system?
 - A. Use high expansion foam to ensure a tight seal.
 - B. Use a small bead of low expansion foam to seal.
 - C. Fill with small amounts of concrete prior to pouring.
 - D. Scribe and fit a piece of plywood to fit and the seal gap.



Level 3 Examples:

1. What are the outside diagonal measurements of a rectangular basement with 200 mm (8") concrete walls, whose length is 30 m (98' 5") and width is 20 m (65' 7½")?

Metric

- A. 35.779 m
- B. 36.333 m
- C. 36.056 m
- D. 36.555 m

Imperial

- A. 116' 4½"
- B. 117' 2½"
- C. 118' 3½"
- D. 119' 11D"



2. A line on a blueprint representing a jog in a wall is drawn 4.25" long. At the scale of $\frac{1}{4}" = 1'$, how long should the dimension read for this jog?

- A. 192"
- B. 16'
- C. 17"
- D. 17'



3. A building is 5 000 mm (16' 5") wide with a 38 x 140 mm (2" x 6") mudsill flush to the outside of the building all the way around. With no central support members, what is the minimum supported joist length required to frame this floor?

Metric

- A. 4 796 mm
- B. 4 720 mm
- C. 4 800 mm
- D. 4 924 mm

Imperial

- A. 15' 9"
- B. 15' 7"
- C. 16'
- D. 16' 2"



Source of questions: www.tradesecrets.gov.ab.ca

Exam Content

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.

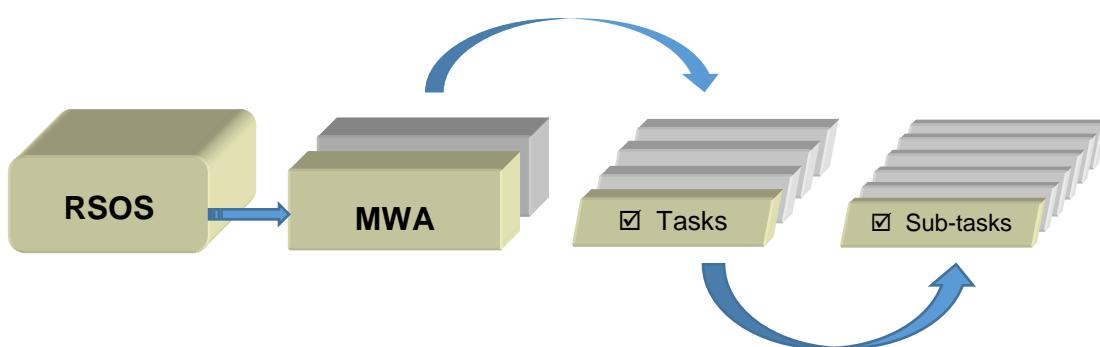
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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*).

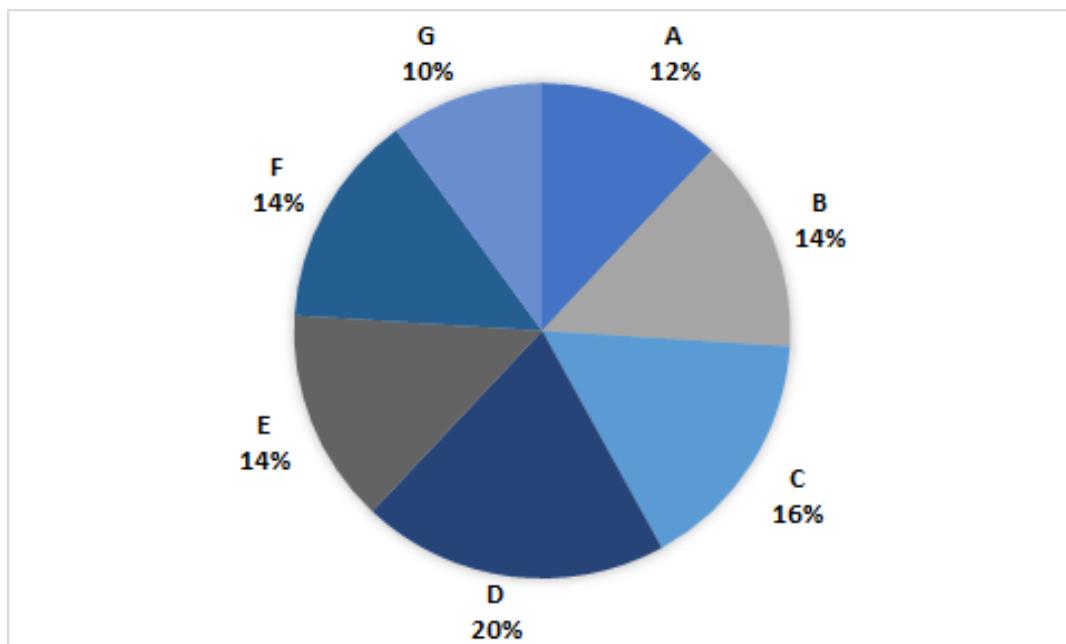


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

RSOS Pie Chart

The RSOS Pie Chart presents the block percentages in the form of a pie chart which tells you the approximate number of questions from each MWA. For example, 14% of the questions on the **Carpenter** Exam will be based on **MWA A**.

Carpenter



MWA Titles			
MWA A	Performs Common Occupational Skills	MWA E	Performs Exterior Finishing
MWA B	Performs Planning and Layout	MWA F	Performs Interior Finishing
MWA C	Performs Concrete Work	MWA G	Performs Renovations
MWA D	Performs Framing		

Exam Breakdown

The **Carpenter** Red Seal Exam has 100 questions. The following table shows a breakdown of the approximate number of questions that come from each RSOS MWA. It is important to note that the 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 for phone numbers*).

		# of Questions
MWA A	Performs Common Occupational Skills	12
Task 1	Uses and maintains tools and equipment	
Task 2	Performs safety related activities	
Task 3	Builds and uses temporary access structures	
Task 4	Uses communication and mentoring techniques	
MWA B	Performs Planning and Layout	14
Task 5	Interprets documentation	
Task 6	Organizes work	
Task 7	Performs layout	
MWA C	Performs Concrete Work	16
Task 8	Constructs formwork	
Task 9	Installs concrete, cement-based and epoxy products	
MWA D	Performs Framing	20
Task 10	Constructs floor systems	
Task 11	Constructs deck systems	
Task 12	Constructs wall systems	
Task 13	Constructs roof and ceiling systems	
MWA E	Performs Exterior Finishing	14
Task 14	Installs exterior doors and windows	
Task 15	Installs roofing	
Task 16	Installs exterior finishes	
MWA F	Performs Interior Finishing	14
Task 17	Applies wall and ceiling finishes	
Task 18	Installs flooring	
Task 19	Installs interior doors and windows	
Task 20	Constructs and installs finish components and stairs	
MWA G	Performs Renovations	10
Task 21	Performs renovation-specific support activities	
Task 22	Performs renovation-specific construction activities	
	Total	100

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 check mark (✓) 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 2022 RSOS
Carpenter

MWA A: Performs Common Occupational Skills

Task 1: Uses and Maintains Tools and Equipment

- | | |
|-----------|--|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Uses hand, power and pneumatic tools<input type="checkbox"/> Uses stationary tools<input type="checkbox"/> Uses powder-actuated tools<input type="checkbox"/> Uses lifting, rigging and hoisting equipment<input type="checkbox"/> Uses layout instruments and equipment<input type="checkbox"/> Uses tack welding equipment (NOT COMMON CORE)<input type="checkbox"/> Uses torch cutting equipment (NOT COMMON CORE) |
|-----------|--|

Task 2: Performs Safety Related Activities

- | | |
|-----------|---|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Uses personal protective equipment (PPE) and safety equipment<input type="checkbox"/> Maintains a safe work environment |
|-----------|---|

Task 3: "y u o

- | | |
|-----------|---|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> y<input type="checkbox"/> y<input type="checkbox"/> -<input type="checkbox"/> U |
|-----------|---|

Task 4: Uses Communication and Mentoring Techniques

- | | |
|-----------|---|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Uses communication techniques<input type="checkbox"/> Uses mentoring techniques |
|-----------|---|

MWA B: Performs Planning and Layout

Task 5: Interprets Documentation

- Sub-Tasks**
- Interprets project drawings
 - Interprets specifications
 - Interprets safety documentation
 - Interprets workplace documentation

Task 6: Organizes Work

- Sub-Tasks**
- Schedules work sequence
 - Performs site preparation
 - Performs quantity take off
 - Organizes material

Task 7: Performs Layout

- Sub-Tasks**
- Performs site layout
 - Lays out concrete formwork
 - Lays out floors
 - Lays out decks
 - Lays out walls
 - Lays out ceilings
 - Lays out roofs
 - Lays out stairs
 - Lays out balustrades

MWA C: Performs Concrete Work

Task 8: Constructs Formwork

- | | |
|-----------|--|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Erects excavation shoring and underpinning<input type="checkbox"/> Erects concrete falsework<input type="checkbox"/> Constructs footing forms<input type="checkbox"/> Constructs wall form systems and grade beam formwork<input type="checkbox"/> Constructs slab formwork<input type="checkbox"/> Constructs column formwork<input type="checkbox"/> Constructs stair formwork<input type="checkbox"/> Installs embedded reinforcements<input type="checkbox"/> Dismantles formwork |
|-----------|--|

Task 9: Installs Concrete, Cement-based and Epoxy Products

- | | |
|-----------|---|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Places concrete<input type="checkbox"/> Facilitates curing of concrete<input type="checkbox"/> Performs basic concrete finishing<input type="checkbox"/> Installs pre-cast components<input type="checkbox"/> Installs grout |
|-----------|---|

MWA D: Performs Framing

Task 10: Constructs Floor Systems

- | | |
|-----------|---|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Installs engineered floor systems<input type="checkbox"/> Constructs dimensional lumber floor framing |
|-----------|---|

Task 11: Constructs Deck Systems

- | | |
|-----------|--|
| Sub-Tasks | <ul style="list-style-type: none"><input type="checkbox"/> Constructs decks<input type="checkbox"/> Installs decks components |
|-----------|--|

MWA D: Performs Framing (Cont'd)

Task 12: Constructs Wall Systems

- Sub-Tasks**
- Installs engineered wall systems
 - Constructs dimensional lumber wall framing

Task 13: Constructs Roof and Ceiling Systems

- Sub-Tasks**
- Installs engineered trusses
 - Constructs roof and ceiling framing

MWA E: Performs Exterior Finishing

Task 14: Installs Exterior Doors and Windows

- Sub-Tasks**
- Installs exterior jambs/frames
 - Installs exterior doors
 - Installs exterior windows
 - Installs exterior door and window hardware

Task 15: Installs Roofing

- Sub-Tasks**
- Installs roofing components
 - Installs roof coverings

Task 16: Installs Exterior Finishes

- Sub-Tasks**
- Installs exterior wall components
 - Installs exterior wall coverings

MWA F: Performs Interior Finishing

- Task 17: Applies Wall and Ceiling Finishes**
 - Sub-Tasks**
 - Installs wallboard
 - Applies compound to walls and ceilings
 - Installs panels, tiles and solid wood finishes
 - Installs suspended ceilings
 - Installs demountable wall systems
- Task 18: Installs Flooring**
 - Sub-Tasks**
 - Installs underlayment
 - Installs floor coverings
 - Installs access flooring
- Task 19: Installs Interior Doors and Windows**
 - Sub-Tasks**
 - Installs interior jambs/frames
 - Installs interior doors
 - Installs interior windows
 - Installs interior door and window hardware
- Task 20: Constructs and Installs Finish Components and Stairs**
 - Sub-Tasks**
 - Fabricates finish components
 - Installs finish components and accessories
 - Constructs stairs

MWA G: Performs Renovations

- Task 21: Performs Renovation-Specific Support Activities**
 - Sub-Tasks**
 - Removes existing material
 - Protects structure during renovations
- Task 22: Performs Renovation-Specific Construction Activities**
 - Sub-Tasks**
 - Joins new to existing construction
 - Changes existing structure during renovations

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

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 journeyperson 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 Plan of Training 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/>

Carpenter PRACTICE Exam

This is **NOT** an Red Seal exam. This is a practice exam provided by the Red Seal 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=38>

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/carpenter/self-assessment.pdf

Acronyms

The Red Seal website has an Acronyms list which will be helpful in preparing for your Red Seal exam:

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

Tools and Equipment

The Red Seal website has a Tools and Equipment list which will be helpful in preparing for your Red Seal exam:

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

Glossary

The Red Seal website also shows a Glossary list which will be helpful in preparing for your exam:

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

Resources – Book List

You can use the below noted list to help you obtain information on specific topics. It is not necessary to use these books specifically, as you may find others that will be equally beneficial.

If you wish to obtain any of the resources listed above, here is the reference information:

- Canadian Wood frame House Construction*, Gage Publishing, 660176033
- Carpentry Textbook*, National Research Council, ISBN 978-0-17-610526-6
- Modern Cabinetmaking*, Goodheart-Wilcox, ISBN 1-56637-271-2
- National Building Code of Canada*, ISBN 0-660-19425-2
- The Use of Hand Woodworking Tools*, Nelson Thomson Learning,
ISBN 0-8273-1098-6

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

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

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

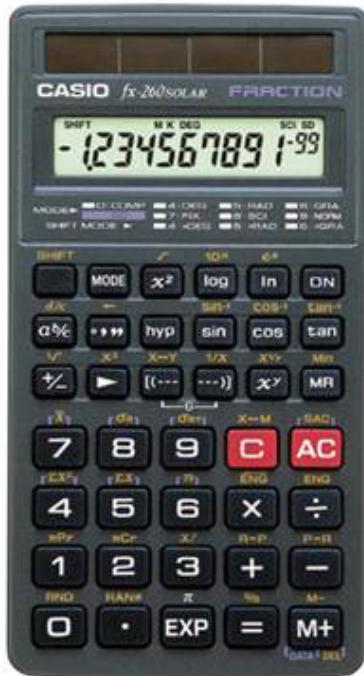
<https://www.gov.nl.ca/atcd/contact-us/staff-listing-and-office-locations/>

Corner Brook	Grand Falls-Windsor
1-3 Union Street Aylward Building, 2 nd Floor Corner Brook, NL A2H 5M7 Telephone: (709) 637-2366 Facsimile: (709) 637-2519	42 Hardy Avenue Grand Falls-Windsor, NL A2A 2J9 Telephone: (709) 292-4215 Facsimile: (709) 292-4502
Clarenville	St. John's
45 Tilley's Road Clarenville, NL A5A 1Z4 Telephone: (709) 466-3982 Facsimile: (709) 466-3987	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 Bursey Building Happy Valley – Goose Bay, NL A0P 1E0 Telephone: (709) 896-6348 Facsimile: (709) 896-3733	

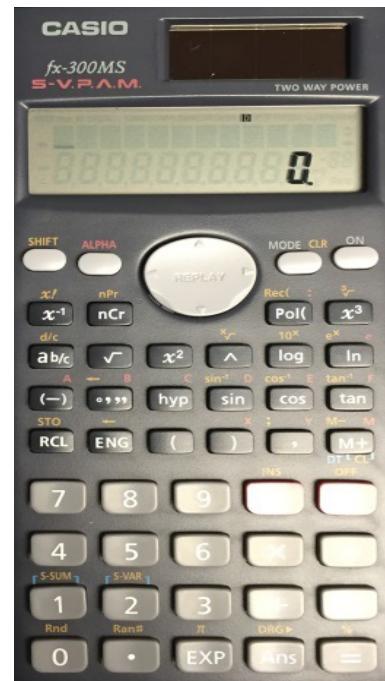
Appendix B: Calculator Use

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



Appendix C: Answer Sheet Example

With your exam you will be given an answer sheet like the one below. When answering multiple choice questions be sure to fill the circle completely and fill the circle that corresponds to the question on the exam.

Feedback Form

Study Guide - Carpenter

Please answer the following:

- (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:

Additional Comments:

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

