APPRENTICESHIP & CERTIFICATION

Study Guide Carpenter

> Newfoundland Labrador APPRENTICESHIP



Newfoundland Labrador

TRADE QUALIN

Department of Immigration, Population Growth and Skills

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Apprenticeship and Certification

Study Guide

Carpenter

(Based on Red Seal Occupational Standard - RSOS 2022)

Government of Newfoundland and Labrador Department of Immigration, Population Growth and Skills

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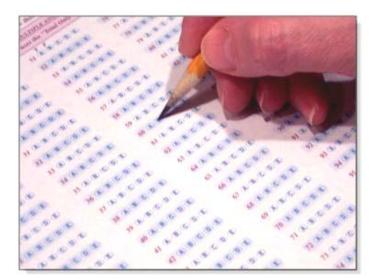
Introduction

This Study Guide has been developed by the Newfoundland and Labrador Department of Immigration, Population Growth and Skills, 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 Immigration, Population Growth and Skills 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

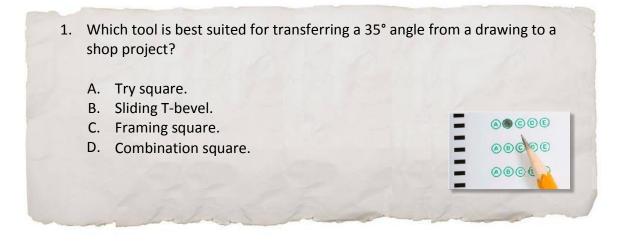
Questions at this level test your ability to apply your knowledge of procedures to a new situation.

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.

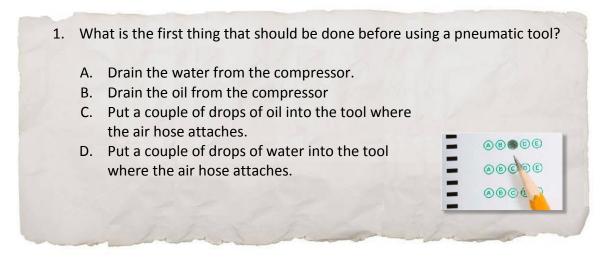
Level 1 Examples:

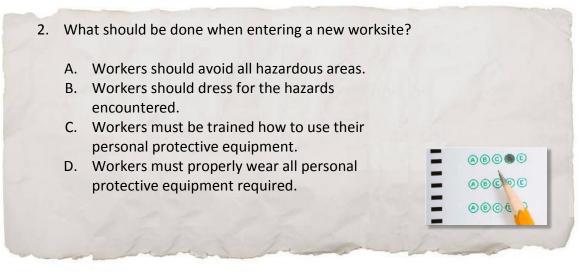


- 2. What should be placed on top of a concrete foundation wall to isolate the bottom plate from the concrete?
 - A. Sill gasket.
 - B. Filler strip.
 - C. Continuous bead of caulking.
 - D. 25 mm (1") of rigid insulation.

- 9008 \
- 00000
- ØBC(
- 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")







- 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.

OBC DE

ABCL

Level 3 Examples:

 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")?

A. 35.779 m A. 116' 4½" B. 36.333 m B. 117' 2½" C. 36.056 m C. 118' 3½"		Metric	Imperial	
	Α.	35.779 m	A. 116' 4½"	
C. 36.056 m C. 118' 3½"	В.	36.333 m	B. 117' 2½"	
	С.	36.056 m	C. 118' 3½"	000
D. 36.555 m D. 119' 11D"	D.	36.555 m	D. 119' 11D"	OBCOC
			21 2 3	ØBC()

2. A line on a blueprint representing a jog in a wall is drawn 4.25" long. At the scale of ¼" = 1', how long should the dimension read for this jog?

	192" 16'			
	17"		=	
D.	17'		=	0000E
			=	0004

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?

A.	4 796 mm	A. 15' 9"	
В.	4 720 mm	B. 15' 7"	
С.	4 800 mm	C. 16'	
D.	4 924 mm	D. 16' 2"	
			- 0004

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.

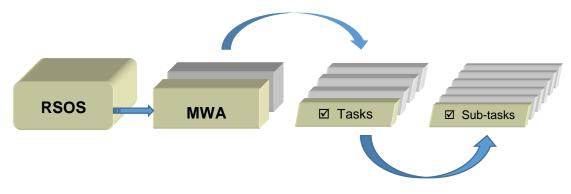
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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

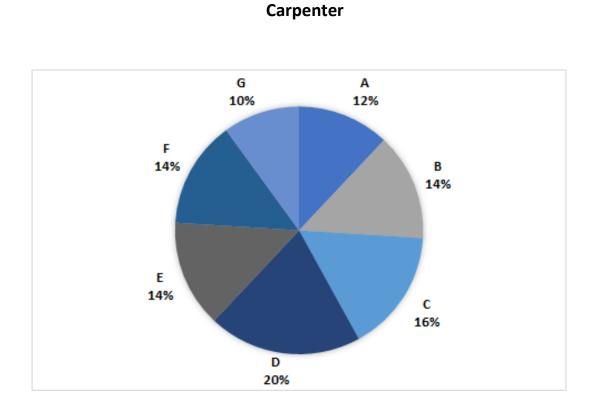
RSOS material is organized into the following categories: **MWA** (*Major Working Activity*). The MWAs are further broken down into **TASKS** (*describes activities within an MWA*) and **SUB-TASKS** (*describe activities within a task – This is what the exam is based on*).



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 block. For example, 14% of the questions on the **Carpenter** Exam will be based on **MWA A**.



MWA Titles					
MWA A	Performs Common Occupational Skills	MWA E	Performs Exterior Finish		
MWA B	Performs Planning and Layout	MWA F	Performs Interior Finish		
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 Finish	14
Task 14	Installs exterior doors and windows	
Task 15	Installs roofing	
Task 16	Installs exterior finishes	
MWA F	Performs Interior Finish	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 (\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 2022 RSOS Carpenter

M۱	NA	A A:	: Pe	rforms Common Occupational Skills
	_	_		
		Та	sk 1:	Uses and Maintains Tools and Equipment
				Uses hand, power and pneumatic tools
				Uses stationary tools
		ks		Uses powder-actuated tools
		Sub-Tasks		Uses lifting, rigging and hoisting equipment
		Sub		Uses layout instruments and equipment
				Uses tack welding equipment (NOT COMMON CORE)
				Uses torch cutting equipment (NOT COMMON CORE)
		Та	sk 2:	Performs Safety Related Activities
				Uses personal protective equipment (PPE) and safety equipment
		sks		
		Sub-Tasks		
		Та	sk 3:	: '' 'y 'u ^{°°} 'o
				y · · ·
		sks		y
		Sub-Tasks		
		Sut		U .
		Та		Uses Communication and Mentoring Techniques
l				
				Uses communication techniques
		sks		Uses mentoring techniques
		Sub-Tasks		
		Sul		

M٧	NA	A B :	Ре	rforms Planning and Layout
		Та	sk 5:	: Interprets Documentation
				Interprets project drawings
		ks		Interprets specifications
		Sub-Tasks		Interprets safety documentation
		-qn		Interprets workplace documentation
		5		
		Та	sk 6:	: Organizes Work
			_	
		Sub-Tasks		Schedules work sequence
				Performs site preparation
		ıb-T		Performs quantity take off
		SL		Organizes material
		Та	sk 7:	: Performs Layout
			_	
				Performs site layout
				Lays out concrete formwork
		10		Lays out floors
		Sub-Tasks		Lays out decks
		ıb-T		Lays out walls
		Su		Lays out ceilings
				Lays out roofs
				Lays out stairs
				Lays out balustrades

M	MWA C: Performs Concrete Work						
	Task 8: Constructs Formwork						
			Erects excavation shoring and underpinning				
			Erects concrete falsework				
			Constructs footing forms				
		(0	Constructs wall form systems and grade beam formwork				
		asks	Constructs slab formwork				
	T-du2	Sub-Tasks	Constructs column formwork				
			Constructs stair formwork				
			Installs embedded reinforcements				
			Dismantles formwork				
	Task 9: Installs Concrete, Cement-based and Epoxy Products						
			Places concrete				
		S	Facilitates curing of concrete				
		ask	Performs basic concrete finishing				
		Sub-Tasks	Installs pre-cast components				
		Sı	□ Installs grout				

MWA D: Performs Framing

Sub-Tasks

Sub-Tasks

Task 10: Constructs Floor Systems

- Installs engineered floor systems
- □ Constructs dimensional lumber floor framing

□ Task 11: Constructs Deck Systems

- □ Constructs decks
- Installs decks components

M	MWA D: Performs Framing (Cont'd)						
		Та	sk 12: Constructs Wall Systems				
		sks	Installs engineered wall systems				
		Sub-Tasks	Constructs dimensional lumber wall framing				
		Та	sk 13: Constructs Roof and Ceiling Systems				
		sks	Installs engineered trusses				
		Sub-Tasks	Constructs roof and ceiling framing				

M١	N/	4 E:	Performs Exterior Finishing					
	Task 14: Installs Exterior Doors and Windows							
			Installs exterior jambs/frames					
		S	□ Installs exterior doors					
		Sub-Tasks	□Installs exterior windows					
		Sub-	Installs exterior door and window hardware					
		Та	sk 15: Installs Roofing					
		sks	Installs roofing components					
		Sub-Tasks	Installs roof coverings					
		Sul						
		Та	ask 16: Installs Exterior Finishes					
		sks	Installs exterior wall components					
		Sub-Tasks	Installs exterior wall coverings					
		Sut						

M١	W/	4 F:	Performs Interior Finishing					
	Task 17: Applies Wall and Ceiling Finishes							
		Tu.	rask 17. Applies wall alle celling rillishes					
			Installs wallboard					
		isks	Applies compound to walls and ceilings					
		Sub-Tasks	 Installs panels, tiles and solid wood finishes Installs suspended ceilings 					
		Sı	 Installs demountable wall systems 					
		Ta	sk 18: Installs Flooring					
		Id	sk 10. Instans Flooring					
		ks.	Installs underlayment					
		Sub-Tasks	Installs floor coverings					
		Sut	Installs access flooring					
		Та	sk 19: Installs Interior Doors and Windows					
			Installs interior jambs/frames					
		sks	□ Installs interior doors					
		Sub-Tasks	Installs interior windows					
		S	Installs interior door and window hardware					
		Та	sk 20: Constructs and Installs Finish Components and Stairs					
		S	□ Fabricates finish components					
		b-Tasks	Installs finish components and accessories					
		Sub	Constructs stairs					
N 4 V			Performs Renovations					
			sk 21: Performs Renovation-Specific Support Activities					
			sk 21. renorms kenovation specific support Activities					
		Sub-Tasks	Removes existing material					
		Sub-	Protects structure during renovations					
			al. 22. Deufermen Demonstion functific Construction Activities					
			sk 22: Performs Renovation-Specific Construction Activities					
		Sub-Tasks	 Joins new to existing construction Changes existing structure during renovations 					
		Sut						

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 NOA subtask 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.						
wea.						
Thu.						
Fri.						
Sat.						
Curr						
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.

Exam Preparation Guide website: https://www.gov.nl.ca/atcd/apprentices-youth/self-study/trade-specific-study-guides/

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 NOA.

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 Inter-provincial Standards Red Seal 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

Glossary of Terms

The Red Seal website also lists a Glossary of Terms which will be helpful in preparing for your Red Seal exam: http://www.red-seal.ca/trades/carpenters/2013n.4.1 .1ppb gl.4ss.1ry-eng.html

Acronyms

The Red Seal website also lists Acronyms which will be helpful in preparing for your Red Seal exam: http://www.red-seal.ca/trades/carpenters/2013n.4.1_.1ppc_.1cr.4nym-eng.html

List of Tools and Equipment

The Red Seal website also shows a list of Tools and Equipment which will be helpful in preparing for your exam: http://www.red-seal.ca/trades/carpenters/2013n.4.1_.1pp.1_t.4.4ls-eng.html

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 Immigration, Population Growth and Skills, 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 Immigration, Population Growth and Skills 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.

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

Department of Immigration, Population Growth and Skills 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	42 Hardy Avenue Grand Falls-Windsor, NL A2A 2J9		
Telephone:(709) 637-2366Facsimile:(709) 637-2519	Telephone:(709) 292-4215Facsimile:(709) 292-4502		

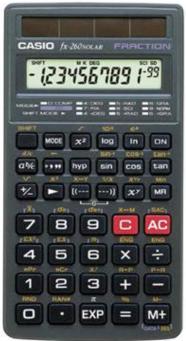
Clarenville	St. John's		
45 Tilley's Road Clarenville, NL A5A 1Z4	P.O. Box 8700 1170 Topsail Road Mount Pearl, NL A1B 4J6		
Telephone: (709) 466-3982 Facsimile: (709) 466-3987	Telephone:(709) 729-2729Facsimile:(709) 729-5878		

Happy Valley – Goose Bay

163 Hamilton River Road Bursey Building Happy Valley – Goose Bay, NL AOP 1EO

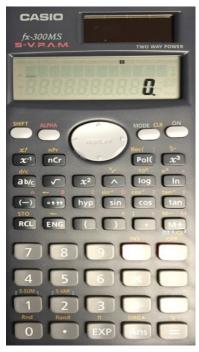
Telephone:(709) 896-6348Facsimile:(709) 896-3733

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.

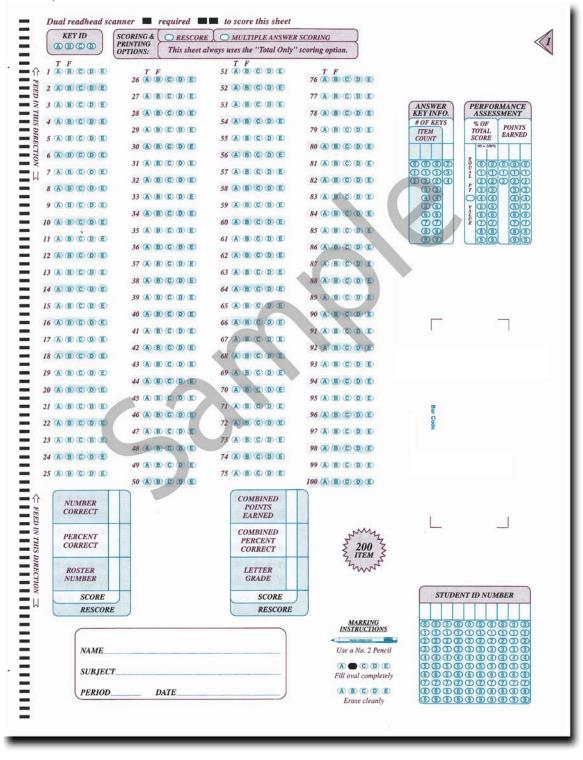


Casio FX-260

Casio FX-300 MS



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)	d 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 Immigration, Population Growth and Skills Apprenticeship and Trades Certification Division Standards and Curriculum Unit 45 Tilley's Road, Clarenville, NL A5A 1Z4 Fax: (709) 466-3987

