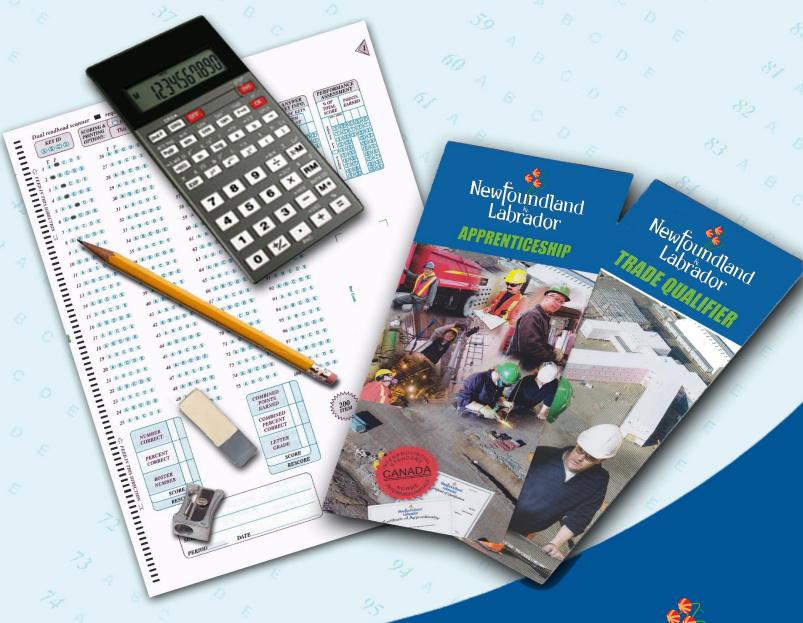
APPRENTICESHIP & CERTIFICATION

Study Guide Cabinetmaker



Apprenticeship and Trades Certification

Study Guide

Cabinetmaker

(Based on Red Seal Occupational Standard - RSOS 2021)

Government of Newfoundland and Labrador

Department of Immigration, Population Growth and

Skills

Version 13

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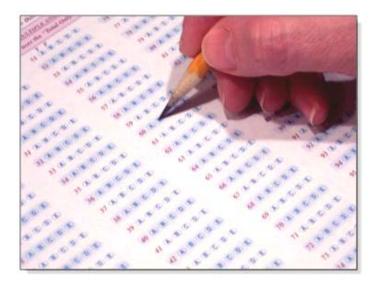
Introduction

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. 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
low	ving will be provided:

The follow

Ш	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

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 refire 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

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.

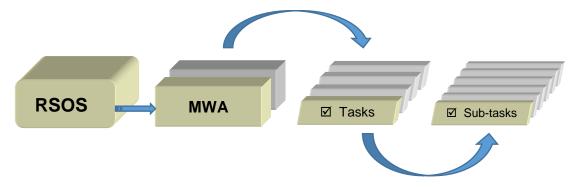
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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*).

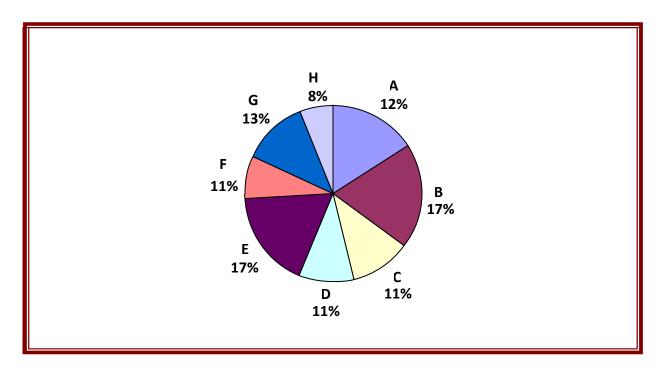


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

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

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 (\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

A A	\: Per	forms Common Occupational Skills
_		
	Task 1:	Performs safety-related functions
sks		Maintains safe work environment
Sub-Tasks		Uses personal protective equipment (PPE) and safety equipment
	Task 2:	Maintains tools and equipment
	_	
ks		Maintains hand, portable power and pneumatic tools and equipment
Sub-Tasks		• •
Sub		Maintains automated and computer numerical control (CNC) equipment
		Maintains finishing equipment
	Task 3:	Organizes work
S		Interprets prints and drawings
Tasl		Plans project
Sub-Tasks		Creates design
٥,		Performs layout of cabinets, furniture and architectural millwork
	Task 4:	Performs routine workpractices
		Handles materials, supplies and products
sks		Fabricates jigs and templates
Sub-Tasks		Builds prototypes
Su		Dry fits components Selects hardware
		Selects adhesives and fasteners
		Selects duriesives and fasteriers
	Task 5:	Uses communication and mentoring technique
S		Uses communication techniques
Tasl		
Sub-Tasks		

MW	MWA B: Performs Machining					
]	Та	sk 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 			
		Ta	sk 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						
		Tas	sk 8:	Creates curved components using wood and composite materials		
		ks		Builds forms		
		Sub-Tasks		Performs curved laminating		
		-qns		Steam-forms wood		
		Tas	sk 9:	Laminates wood and composite materials		
		ks		Arranges materials for laminating		
		Tas		Applies adhesive for laminating		
		Sub-Tasks		Clamps pieces together		
		-,				

MWA D: Installs Veneers and Laminates					
		Task 10: Applies veneers			
			□ Se	elects veneers	
		sks	☐ Pr	repares veneers and substrate	
		Sub-Tasks	□ Ac	dheres veneers to substrates	
		Su	□ Pe	erforms final clean-up of veneered panels	
		Tas	sk 11: <i>A</i>	Applies laminate sheets	
			□ Se	elects laminate sheets	
		Sub-Tasks	□ P	repares laminate sheets and substrate	
		p-T	□ A	dheres laminate sheets to substrate	
		Su	□ P	erforms final clean-up of laminated sheets	

MWA E: Performs Shop Assembly						
		Tas	sk 12:	Assembles cabinets and furniture		
				Assembles cabinet components		
		sks		Assembles furniture components		
		Sub-Tasks		Combines cabinets and furniture components into final assemblies		
		Tas	sk 13:	Assembles architectural millwork products		
		s)		Assembles architectural millwork components in shop		
		Sub-Tasks		Assembles architectural fixtures in shop		
		Sub-				

MWA F: Performs Finishing					
		Ta	sk 14:	Prepares surface for finishing	
		(Repairs imperfections	
		asks		Prepares parts for finishing	
		Sub-Tasks		Performs final sanding of surfaces	
		Ta	sk 15:	Finishes wood products	
		ks		Prepares finishing materials	
		Sub-Tasks		Applies finishing material manually	
		Sub		Sprays on finishing material	

MWA G: Performs On-Site Assembly and Installation									
	☐ Task 16: Modifies products to site conditions								
		S		Cuts access holes on site					
		Sub-Tasks		Scribes product to fit on site					
		Ta	sk 17:	: Installs cabinets and countertops					
		S		Performs final on-site assembly and fastening of cabinets and countertops					
		Sub-Tasks		Finalizes installation of cabinets and countertops					
	[⊒Ta	sk 18:	Installs architectural millwork products and mouldings					
		ks		Performs final on-site assembly and fastening of architectural millwork products					
		Tas		Installs mouldings					
		Sub-Tasks		Finalizes installation of architectural millwork products and mouldings					

MW	MWA H: Performs Specialized Operations							
] 1	Task 19: Builds stairs and balustrades						
			Lays out stair and balustrade components					
	ckc		Machines stair and balustrade components					
	Suh-Tacks		Assembles stairs and balustrades					
	3		Installs stairs and balustrades					
] 7	Task 20	: Works with solid surface material and custom countertops					
	ckc		Breaks out materials					
	Sub-Tacks		Fabricates solid surface material					
	113		Installs solid surface material					
		Task 21: Creates decorative woodwork						
		iask 21	: Creates decorative woodwork					
	y.		Performs marquetry (NOT COMMON CORE)					
	Suh-Tacks		Performs carving (NOT COMMON CORE)					
	di S		Performs woodturning					
] 1	Task 22	: Restores woodwork					
	۷	, 🗆	Repairs woodwork for restoration purposes					
	Tacl		Refinishes woodwork					
	Suh-Tacks	}						

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.						
weu.						
Thu.						
Fri.						
Sat.						
Sun.						
Ju						

Study	<i>T</i> ime	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 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/apprentices-youth/self-study/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 POT is based on the NOA.

POT Website: 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.

Red Seal Website: 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

Acronyms

The Red Seal website also 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

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						

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.

Appendix A: Regional Offices

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

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

Telephone: (709) 637-2366 Facsimile: (709) 637-2519

Clarenville

45 Tilley's Road Clarenville, NL A5A 1Z4

Telephone: (709) 466-3982 Facsimile: (709) 466-3987

Grand Falls-Windsor

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

Telephone: (709) 292-4215 Facsimile: (709) 292-4502

St. John's

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

Telephone: (709) 729-5688 Facsimile: (709) 729-5878

Happy Valley – Goose Bay

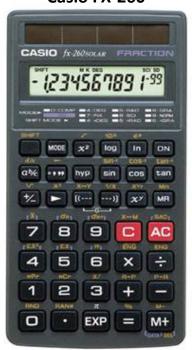
163 Hamilton River Road
Bursey Building
Happy Valley-Goose Bay, NL AOP 1EO

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

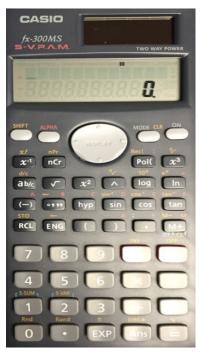
Appendix B: Calculator Use

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

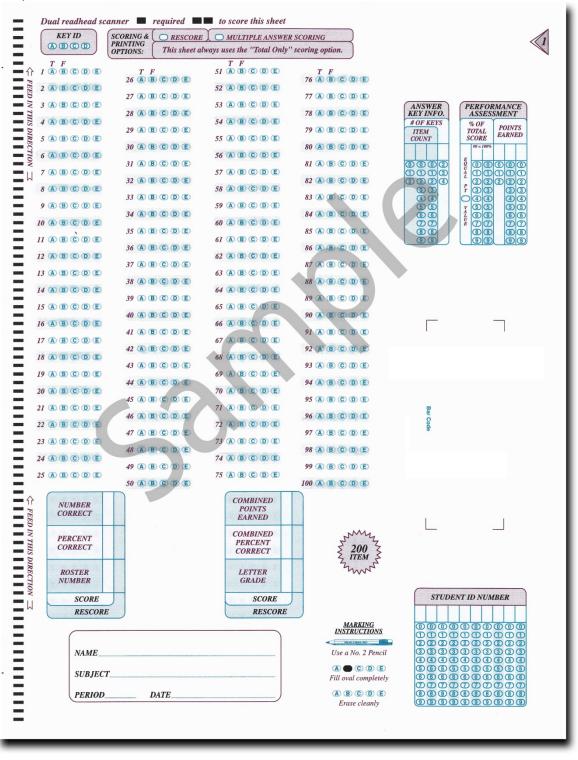


Casio FX-300 MS



Appendix C: Answer Sheet Example

With your exam you will be given an answer sheet similar to 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 – Cabinetmaker

Pleas	Please answer the following:								
(1)	This Study Guide is a		•						
	☐ 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 form	•							
	☐ strongly agree	□ agree	□ disagree	☐ strongly disagree					
(4)	The instructions thro	oughout the gu	ide are clear an	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 co	The guide should contain more information.							
	☐ strongly agree	□ agree	\square disagree	☐ strongly disagree					
Sugge	ested information/reso	ources to includ	le:						
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

