

# 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.

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

#### Level 1 Examples:

1. Which type of hole requires a spiral-fluted hand reamer?

- A. Oval-shaped.
- B. Oversized.
- C. Bell-mouthed.
- D. Keyed or slotted.



2. Why is a grinding allowance left on the workpiece prior to heat treatment process?

- A. Material shrinkage.
- B. Material hardening.
- C. Material distortion.
- D. Material expansion.



3. What product is used to check the final fit of mating tapers?

- A. Layout dye.
- B. Prussian blue.
- C. Penetrating dye.
- D. Lapping compound.



### Level 2 Examples:

1. What size is the gauge MWA build-up used with a 5 in. sine bar to set the work piece at an angle of  $4^{\circ} 30'$ ?

- A. 0.1961 in.
- B. 0.3923 in.
- C. 0.4537 in.
- D. 0.7846 in.



2. Which offset is required to produce an eccentric with a throw of 0.400 in.?

- A. 0.100 in.
- B. 0.200 in.
- C. 0.300 in.
- D. 0.400 in.



3. Which instruments are used to measure a 1 in. diameter bored hole with a tolerance of  $\pm 0.001$  in.?

- A. Centre gauge and gauge MWAs.
- B. Dial indicator and gauge MWAs.
- C. Spring-joint dividers and micrometer.
- D. Telescopic gauge and micrometer.



### Level 3 Examples:

1. What is the time required to turn SAE 4140 steel to 2 in. diameter down to 1.875 in. diameter with a depth of cut at 0.0625 in., 9 in. in length, using a cutting speed of 70 sfpm, with a feed rate of 0.006 in. per revolution?

$$[rpm = (12 \times CS) \div (p \times D)]$$

- A. 11 minutes, 13 seconds.
- B. 12 minutes, 31 seconds.
- C. 14 minutes, 30 seconds.
- D. 15 minutes, 37 seconds.





2. How far is the centerline of the spindle from the edge of the workpiece when using a 0.200 in. diameter edge finder?

- A. 0.100 in.
- B. 0.200 in.
- C. 0.300 in.
- D. 0.400 in.



3. Which type of grinding machine is used to produce 1000 dowel pins that measure 0.250 in. diameter?

- A. Cylindrical.
- B. Centreless.
- C. Surface.
- D. Vertical.



**Source of questions:**

[www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=139](http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=139)

## 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.

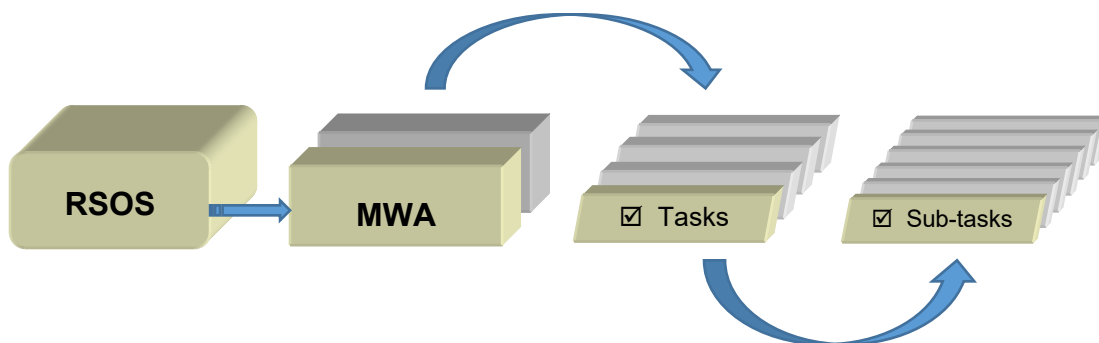
The RSOS was introduced in 2015 and is now taking the place of the NOA. Each RSOS or NOA sets the standard for a Red Seal trade. The Red Seal Examination is based on the Red Seal Standard.

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 increased 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*).

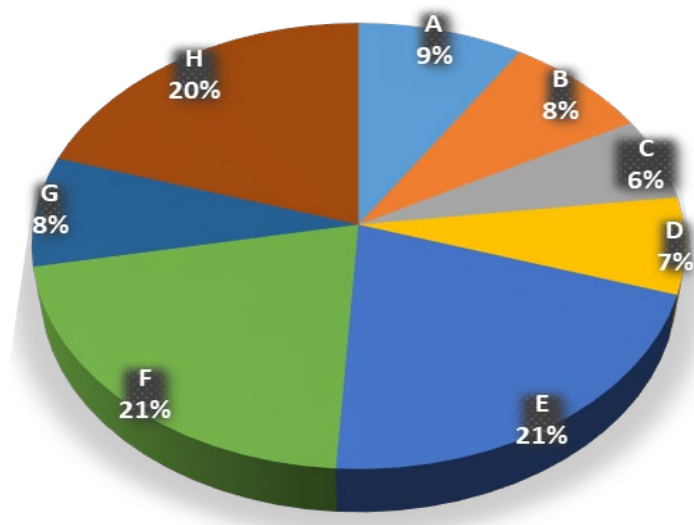


The NOA will continue to be used as the occupational standard for trades that do not yet have an RSOS developed.

## 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, 9% of the questions on the **Machinist** Exam will be based on **MWA A**.

**MACHINIST**



MWA Titles			
MWA A	Performs Common Occupational Skills	MWA E	Machines using Conventional Lathes
MWA B	Performs Bench Work	MWA F	Machines using Conventional Milling Machine
MWA C	Machines using Power Saws	MWA G	Machines using Precision Grinding Machines
MWA D	Machines using Drill Presses	MWA H	Machines Using Computer Numerical Control (CNC) Machines



## Exam Breakdown

The **Machinist** Red Seal Exam has 135 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).

		# of Questions
<b>MWA A</b>	<b>Performs Common Occupational Skills</b>	<b>13</b>
<b>Task 1</b>	Performs safety-related tasks	
<b>Task 2</b>	Organizes work	
<b>Task 3</b>	Uses communication and mentoring techniques	2
<b>Task 4</b>	Processes work-piece material	4
<b>Task 5</b>	Maintains machines, tooling and inspection equipment	2
<b>MWA B</b>	<b>Performs Bench Work</b>	<b>11</b>
<b>Task 6</b>	Performs hand processes	8
<b>Task 7</b>	Refurbishes components	3
<b>MWA C</b>	<b>Machines using Power Saws</b>	<b>8</b>
<b>Task 8</b>	Sets up power saws	5
<b>Task 9</b>	Operates power saws	3
<b>MWA D</b>	<b>Machines using Drill Presses</b>	<b>9</b>
<b>Task 10</b>	Sets up drill presses	5
<b>Task 11</b>	Operates drill presses	4
<b>MWA E</b>	<b>Machines using Conventional Lathes</b>	<b>28</b>
<b>Task 12</b>	Sets up conventional lathes	14
<b>Task 13</b>	Operates conventional lathes	14
<b>MWA F</b>	<b>Machines using Conventional Milling Machines</b>	<b>28</b>
<b>Task 14</b>	Sets up conventional milling machines	15
<b>Task 15</b>	Operates conventional milling machines	13
<b>MWA G</b>	<b>Machines using Precision Grinding Machines</b>	<b>11</b>
<b>Task 16</b>	Sets up precision grinding machines	6
<b>Task 17</b>	Operates precision grinding machines	5
<b>MWA H</b>	<b>Machines using Computer Numerical Control (CNC) Machines</b>	<b>27</b>
<b>Task 18</b>	Performs CNC programming	12
<b>Task 19</b>	Sets up CNC machines	8
<b>Task 20</b>	Operates CNC machines	7
	<b>Total</b>	<b>135</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 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 2018 RSOS  
Machinist**

**MWA A: Performs Common Occupational Skills**

☐ **Task 1: Performs safety-related tasks**

**Sub-Tasks**

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

☐ **Task 2: Organizes work**

**Sub-Tasks**

- ☐ Interprets documentation
- ☐ Plans sequence of operations

☐ **Task 3: Uses communication and mentoring techniques**

**Sub-Tasks**

- ☐ Uses communication techniques
- ☐ Uses mentoring techniques

☐ **Task 4: Processes Work-piece Material**

**Sub-Tasks**

- ☐ Selects workpiece material
- ☐ Uses hoisting, lifting and rigging equipment
- ☐ Marks workpiece for identification
- ☐ Performs heat treatment
- ☐ Performs quality control of workpiece
- ☐ Deburrs workpiece
- ☐ Sketches parts

☐ **Task 5: Maintains machines, tooling and inspection equipment**

**Sub-Tasks**

- ☐ Cleans machines
- ☐ Lubricates machines
- ☐ Sharpens tooling
- ☐ Applies cutting fluid and coolant
- ☐ Troubleshoots equipment
- ☐ Maintains machine alignment
- ☐ Maintains inspection equipment



## MWA B: Performs Bench Work

### ☐ Task 6: Performs Hand Processes

#### Sub-Tasks

- ☐ Performs layout
- ☐ Saws workpiece
- ☐ Files workpiece
- ☐ Performs hole-making operations
- ☐ Performs threading operations
- ☐ Installs thread inserts
- ☐ Broaches workpiece
- ☐ Performs pressing operations
- ☐ Forms workpiece
- ☐ Finishes workpiece

### ☐ Task 7: Refurbishes Components

#### Sub-Tasks

- ☐ Disassembles components
- ☐ Analyzes components
- ☐ Assembles components

## MWA C: Machines using Power Saws

### ☐ Task 8: Sets Up Power Saws

#### Sub-Tasks

- ☐ Selects power saw types
- ☐ Selects saw blades
- ☐ Installs saw blades
- ☐ Selects power saw speeds and feeds
- ☐ Makes power saw adjustments
- ☐ Sets up work-piece on power saw

### ☐ Task 9: Operates Power Saws

#### Sub-Tasks

- ☐ Saws straight and angle cuts
- ☐ Cuts irregular shapes

## MWA D: Machines using Drill Presses

### ☐ Task 10: Sets Up Drill Presses

#### Sub-Tasks

- ☐ Selects drill press types
- ☐ Plans operations of drill presses
- ☐ Selects drill press speeds and feeds
- ☐ Sets up jigs, fixtures and work holding devices for drill processes
- ☐ Sets up tooling for drill presses

### ☐ Task 11: Operates Drill Presses

#### Sub-Tasks

- ☐ Drills holes using a drill press
- ☐ Cuts countersinks, counter-bores, chamfers and spot faces using a drill press
- ☐ Performs tapping using a drill press
- ☐ Finishes holes using a drill press

## MWA E: Machine using Conventional Lathes

### ☐ Task 12: Sets up Conventional Lathes

#### Sub-Tasks

- ☐ Selects conventional lathe types
- ☐ Plans operation of conventional lathes
- ☐ Sets up work holding devices for conventional lathes
- ☐ Sets up tooling for conventional lathes
- ☐ Sets up conventional lathe accessories
- ☐ Sets up workpiece on conventional lathe
- ☐ Selects conventional lathe speeds and feeds

## MWA E: Machine using Conventional Lathes (Cont'd)

### ☐ Task 13: Operates Conventional Lathes

#### Sub-Tasks

- ☐ Faces surfaces using a conventional lathe
- ☐ Turns external surfaces using a conventional lathe
- ☐ Drills using a conventional lathe
- ☐ Bores holes using a conventional lathe
- ☐ Reams holes using a conventional lathe
- ☐ Turns tapers using a conventional lathe
- ☐ Knurls using a conventional lathe
- ☐ Cuts grooves using a conventional lathe
- ☐ Cuts threads using a conventional lathe
- ☐ Parts off workpiece using a conventional lathe

## MWA F: Machines using Conventional Milling Machines

### ☐ Task 14: Sets Up Conventional Milling Machines

#### Sub-Tasks

- ☐ Selects conventional milling machine types
- ☐ Plans operation of milling machines
- ☐ Sets up work holding devices for conventional milling machines
- ☐ Sets up tooling for conventional milling machines
- ☐ Sets up milling accessories
- ☐ Sets up workpiece on a conventional milling machine
- ☐ Selects conventional milling machine speeds and feeds

### ☐ Task 15: Operates Conventional Milling Machines

#### Sub-Tasks

- ☐ Mills surfaces using a conventional milling machine
- ☐ Mills profiles and pockets using a conventional milling machine
- ☐ Mills slots, grooves and key-ways using a conventional milling machine
- ☐ Cuts gears and splines using a conventional milling machine
- ☐ Drills holes using a conventional milling machine
- ☐ Reams holes using a conventional milling machine
- ☐ Cuts countersinks, counter-bores, chamfers and spot faces using a conventional milling machine
- ☐ Performs tapping using a conventional milling machine
- ☐ Bores holes using a conventional milling machine



## MWA G: Machines using Precision Grinding Machines

### ☐ Task 16: Sets up Precision Grinding Machines

- |                  |   |
|------------------|---|
| <b>Sub-Tasks</b> | <ul style="list-style-type: none"><li><input type="checkbox"/> Selects precision grinding machine types</li><li><input type="checkbox"/> Plans operation of grinding machines</li><li><input type="checkbox"/> Sets up work holding devices for precision grinding machines</li><li><input type="checkbox"/> Mounts grinding wheel</li><li><input type="checkbox"/> Sets up grinding accessories</li><li><input type="checkbox"/> Sets up workpiece on precision grinding machines</li><li><input type="checkbox"/> Selects precision grinding machine speeds and feeds</li></ul> |
|------------------|---|

### ☐ Task 17: Operates Precision Grinding Machines

- |                  |  |
|------------------|--|
| <b>Sub-Tasks</b> | <ul style="list-style-type: none"><li><input type="checkbox"/> Grinds flat surfaces using a surface grinder</li><li><input type="checkbox"/> Grinds profiles</li><li><input type="checkbox"/> Grinds internal and external cylindrical and tapered surfaces</li><li><input type="checkbox"/> Grinds tools and cutters</li><li><input type="checkbox"/> Finishes holes using a honing machine</li></ul> |
|------------------|--|

## MWA H: Machines using Computer Numerical Control (CNC) Machines

### ☐ Task 18: Performs CNC Programming

- |                  |  |
|------------------|--|
| <b>Sub-Tasks</b> | <ul style="list-style-type: none"><li><input type="checkbox"/> Creates process documentation</li><li><input type="checkbox"/> Creates manual input program</li><li><input type="checkbox"/> Transfers program to and from control memory</li><li><input type="checkbox"/> Optimizes program</li><li><input type="checkbox"/> Creates 2D and 3D models</li><li><input type="checkbox"/> Programs using computer-aided manufacturing (CAM)</li></ul> |
|------------------|--|

### ☐ Task 19: Sets up CNC Machines

- |                  |  |
|------------------|--|
| <b>Sub-Tasks</b> | <ul style="list-style-type: none"><li><input type="checkbox"/> Selects tooling and tool holders for CNC machines</li><li><input type="checkbox"/> Sets up tooling and tool holders for CNC machines</li><li><input type="checkbox"/> Sets up work-pieces on CNC machines</li><li><input type="checkbox"/> Establishes work datum</li><li><input type="checkbox"/> Verifies program</li></ul> |
|------------------|--|

### ☐ Task 20: Operates CNC Machines

- |                  |  |
|------------------|--|
| <b>Sub-Tasks</b> | <ul style="list-style-type: none"><li><input type="checkbox"/> Adjusts offsets</li><li><input type="checkbox"/> Monitors machining processes</li><li><input type="checkbox"/> Interrupts program cycle</li><li><input type="checkbox"/> Restarts program cycle</li></ul> |
|------------------|--|

## Create a Study Plan

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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 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-November-2025.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/>

### Machinist PRACTICE Exam

This is **NOT** a 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.

<http://www.red-seal.ca/s.1mpl.2.2x.1mQ.5.2st.3.4ns-eng.html?tid=139>

### 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/eng/trades/139\\_machinist/.2x.1m\\_cs.shtml#s1](https://www.red-seal.ca/eng/trades/139_machinist/.2x.1m_cs.shtml#s1)

### Acronyms

The Red Seal website lists Acronyms which will be helpful in preparing for your Red Seal exam:

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

### Tools and Equipment

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

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

### Glossary

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

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

## Resources – Book List

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You can use the list noted below 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 below, here is the reference information:**

- ☐ *Technology of Machine Tools*, 7<sup>th</sup> edition, McGraw-Hill, Gill, Krar, and Smid, ISBN 978-0078010514
- ☐ *Interpreting Engineering Drawings*, 5<sup>th</sup> edition, Nelson Canada, Jenson, ISBN 0176501991
- ☐ *Machining Fundamentals*, 8<sup>th</sup> edition, Goodheart-Wilcox, 2004, Walker, J.R., ISBN 10-1590702492, 13-978-1590702499



## 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/>

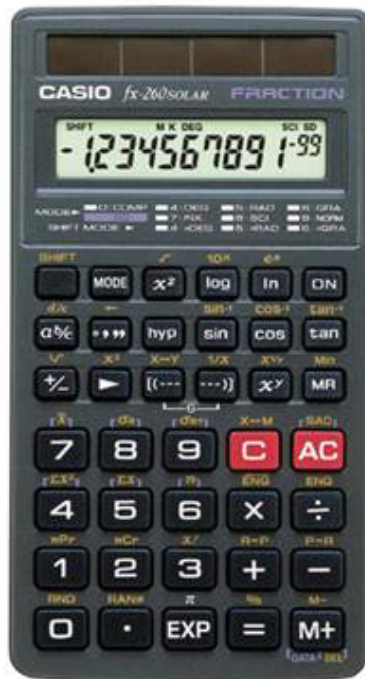
<b>Corner Brook</b>  1-3 Union Street Aylward Building, 2 <sup>nd</sup> Floor Corner Brook, NL A2H 5M7  Telephone: (709) 637-2366 Facsimile: (709) 637-2519	<b>Grand Falls-Windsor</b>  42 Hardy Avenue Grand Falls-Windsor, NL A2A 2J9  Telephone: (709) 292-4215 Facsimile: (709) 292-4502
<b>Clarenville</b>  45 Tilley's Road Clarenville, NL A5A 1Z4  Telephone: (709) 466-3982 Facsimile: (709) 466-3987	<b>St. John's</b>  P.O. Box 8700 1170 Topsail Road Mount Pearl, NL A1B 4J6  Telephone: (709) 729-2729 Facsimile: (709) 729-5878
<b>Happy Valley – Goose Bay</b>  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

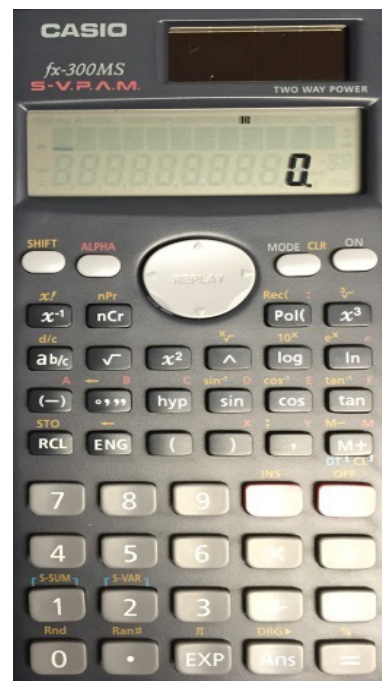
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The picture below shows a calculator with the same functions as the one you will be provided with during your exam. It is advisable to borrow or purchase one with similar functions so that you can familiarize yourself with it before you write your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

**Casio FX-260**



**Casio FX-300 MS**



## 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.

**Dual readhead scanner** ■ required ■■ to score this sheet

**KEY ID**  
A B C D

**SCORING & PRINTING OPTIONS:**  
☐ RESCORE ☐ MULTIPLE ANSWER SCORING  
 This sheet always uses the "Total Only" scoring option.

**ANSWER KEY INFO.**

# OF KEYS	ITEM COUNT
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

**PERFORMANCE ASSESSMENT**

% OF TOTAL SCORE	POINTS EARNED
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

**Bar Code**

**200 ITEM**

**MARKING INSTRUCTIONS**  
 Use a No. 2 Pencil  
 Fill oval completely  
 Erase cleanly

**STUDENT ID NUMBER**

0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9

**NUMBER CORRECT**  
**PERCENT CORRECT**  
**ROSTER NUMBER**  
**SCORE**  
**RESCORE**

**COMBINED POINTS EARNED**  
**COMBINED PERCENT CORRECT**  
**LETTER GRADE**  
**SCORE**  
**RESCORE**

**NAME** \_\_\_\_\_  
**SUBJECT** \_\_\_\_\_  
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↑ FEED IN THIS DIRECTION

## Feedback Form

### Study Guide – Machinist

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

