



NATIONAL ELECTRICAL TRADE COUNCIL

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# NUMERACY POWER



# Warm-Up Guide



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CONSTRUCTION  
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## National Electrical Trade Council (NETCO)

NETCO is the joint training arm of the electrical industry’s national Labour and Management partners in Canada—the International Brotherhood of Electrical Workers (IBEW), First District, Canada and the Canadian Electrical Contractors Association (CECA). It is a human resources conduit to address shared interests in workforce skills development. NETCO’s mandate is to promote national standards, apprenticeship and journeyman skills training for the electrical industry in Canada, with a particular focus on the three Red Seal electrical trades.

NETCO is the voice of the electrical industry in Canada. It speaks on behalf of over 8,000 electrical contractors and IBEW Local Unions representing 63,000 members in every province and territory. A significant number of IBEW members work and learn as electrical journeymen and apprentices.

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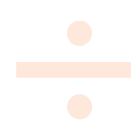
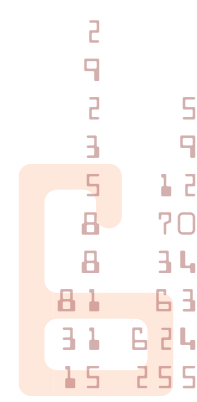
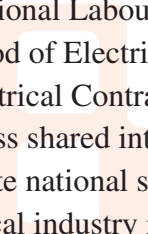
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# Numeracy Power Warm-Up Guide

## About the Warm-Up Guide

The Warm-Up Guide provides apprentices with introductory information about Numeracy Power. It will answer many of the questions that you may have prior to the assessment. It is designed to demystify the assessment process and give you an idea of what to expect in advance.

## Power Up for Success in Electrical Apprenticeship

Foundation numeracy skills are essential learning tools for electrical apprentices. For example, the ability to perform measurement conversions helps apprentices learn technical skills in the classroom and apply them on-the-job.

Strong numeracy skills are linked to success in electrical trades training leading to a Red Seal endorsement. Rusty or weak numeracy skills are a barrier to learning in electrical apprenticeship and a root cause of failure or drop out. Apprentices who recognize their numeracy capabilities and do targeted skills development are more likely to have the confidence and competence needed to become qualified journeypersons.



## What is Numeracy Power?

**Numeracy Power** is an on-line assessment tool that triggers the development of foundation numeracy skills linked to success in electrical trades training leading to a Red Seal endorsement. The Numeracy Power assessment becomes a conduit to skills building.

It is designed for use with electrical apprentices and pre-apprentices in the three Red Seal electrical trades—Construction Electrician, Industrial Electrician and Powerline Technician. (These occupational titles may vary by province/territory. For example, Ontario refers to Construction & Maintenance Electrician).

NETCO makes this resource available through a national network of Numeracy Power Coaches selected from organizations involved in apprenticeship administration and/or training (e.g., Joint Apprenticeship & Training Committees, community colleges). They proctor the assessment and assist in developing a learning plan that works for you.

There are three steps to Numeracy Power in action:

1. **Assessment** The on-line assessment is done at the Numeracy Power Coach's venue. It takes up to 90 minutes to complete (individual times may vary).
2. **Skills Profiling** The assessment tool generates a Numeracy Power Skills **Profile** that identifies your strengths and weaknesses in 13 foundation numeracy skills (e.g., fractions, trigonometry)
3. **Skills Building** The Numeracy Power Skills Profile triggers the development of an individualized learning plan with guidance from your Numeracy Power Coach.

## Design of the Numeracy Power On-line Assessment Tool



- ❖ Numeracy Power has 65 multiple-choice questions. Each question has four possible responses. The multiple-choice format is also used for Red Seal electrical exams.
- ❖ The foundation numeracy skills are organized into 13 modules. There are five questions per module.
- ❖ Many questions require you to locate information presented in a scenario or graphic.
- ❖ The questions reflect the work context that apprentices typically experience but do not depend on electrical skills and knowledge. Numeracy Power measures foundation numeracy skills not technical trade skills.

Numeracy Power includes the following 13 foundation numeracy skills:

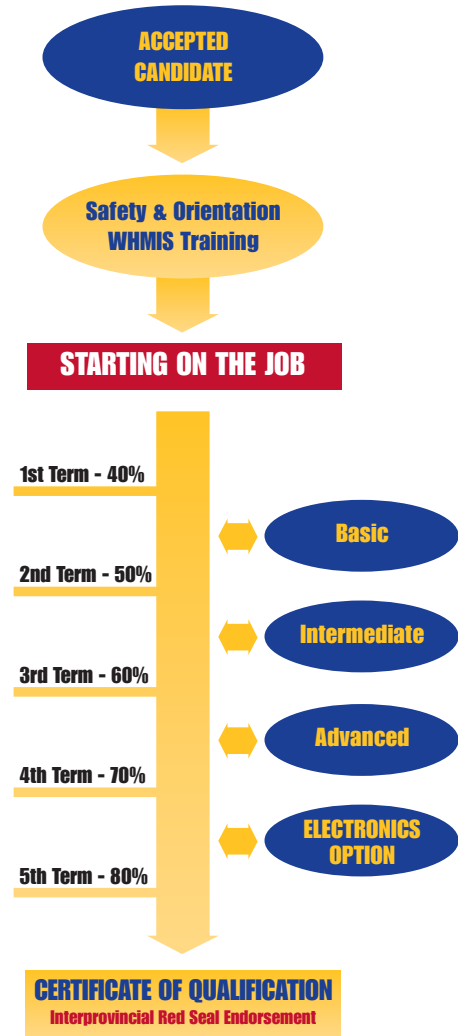
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|------------------------|-------------------------------|
| ● Whole Numbers        | ● Rates, Ratios & Proportions |
| ● Integers             | ● Measurement Conversions     |
| ● Fractions            | ● Area, Perimeter & Volume    |
| ● Decimals             | ● Geometry                    |
| ● Percent              | ● Trigonometry                |
| ● Exponents            | ● Summary Calculations        |
| ● Equations & Formulae |                               |

## Sample Question

Journeyman Electricians earn \$33/hour. Apprentices earn a percentage of that rate depending on what term they are in. How many hours must a 4th term apprentice work to earn a 15% deposit on a \$22,500 truck? Round off to the nearest hour.

- a) 102 hours
- b) 128 hours
- c) 146 hours
- d) 974 hours

### PATHWAY TO CERTIFICATION





## Instructions for Assessment Administration

- ✓ You may use a basic calculator. Scientific calculators (ones with programmed formulas) are not allowed.
- ✓ Don't rush. Work carefully.
- ✓ Complete all the questions to the best of your ability.
- ✓ You are not penalized for wrong answers so answer all questions. If unsure, take your best guess.
- ✓ Indicate your answer by selecting the appropriate response.
- ✓ There is an opportunity to review your answers at the end of each module. There is a check mark on the screen for you to use if you are unsure about your answer as a reminder to go back and review.
- ✓ A progress bar on the bottom of the screen indicates how much of the assessment you have completed.

### Personal Information Consent Form

Numeracy Power includes a consent that allows your Numeracy Power Coach and the National Electrical Trade Council (NETCO) to collect and store personal information and test results in a secure electronic data base.

You must indicate your consent in order to take the assessment.

Personal information (e.g., age, language first learned at home) is collected in a Background Questionnaire that you must complete before the assessment begins. This information assists your Numeracy Power Coach in interpreting your Numeracy Power Skills Profile. It also assists the National Electrical Trade Council (NETCO) to identify the electrical industry's training needs across Canada.

The Background Questionnaire does not ask for your name. Your name is not collected and stored in the Numeracy Power data base. Your Numeracy Power Coach will assign you an ID/Reference Number. Your Numeracy Power Coach is the only one who can match your name to your ID/Reference Number in order to discuss your Numeracy Power Skills Profile with you.