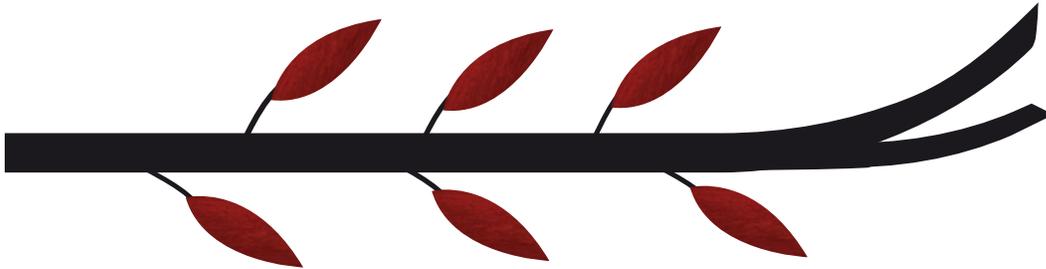


Assessor's Booklet: Numeracy Level 1



This Assessor's Booklet is divided into two parts.

Part One includes:

- Assessor's instructions for administering the Numeracy Level 1: Client Assessment Booklet.

Part Two includes:

- An introduction and detailed instructions for the client on the assessment process;
- Answers and explanations for each assessment task; and
- A section for the assessor to record a client's assessment results and observations.

Candidate's Name: _____

Date of Assessment: _____

Assessment Location: _____

Assessor's Name: _____

PART ONE

Assessor's Instructions

Please ensure that you have read the accompanying **Guide for Conducting an Essential Skills Needs Assessment** prior to administering any of the assessment booklets. The Guide provides a **step-by-step process for conducting an informal Essential Skills needs assessment, including useful tips and suggestions.**

This is an informal assessment tool that is intended to support career and employment counsellors to work with clients to help them better understand their **numeracy** skills strengths and areas that may require improvement. The assessment results will support making more informed decisions on developing training plans and performing job searches. In situations where formal test scores are needed to be compared to other test results or job skill requirements, the use of formal assessment tools may be more suitable.

➤ Each assessment question in this booklet is a typical workplace task that shows how numeracy skills are used in different jobs in Canada.

➤ The questions are organized in order of difficulty starting with simple tasks and progressing to more difficult ones.

➤ You may read the assessment **instructions** out loud and provide further explanation if required. It is important to encourage clients to complete as many tasks as they can **independently** so that a more accurate understanding of their abilities can be understood. **Once the client has completed as many numeracy tasks as possible on their own, you can assist them with the remaining tasks.**

➤ In cases where clients have difficulty with reading and comprehension, you can read the questions out loud and clarify any words or terminology that may be unfamiliar to them.

➤ Clients are encouraged to complete the numeracy tasks without a calculator.

➤ Clients are encouraged to use the space following each question to write down notes and show the steps/process they used to arrive at the answer.

➤ Clients are permitted to ask questions at anytime during the assessment.

➤ If clients have difficulty completing any of the tasks, suggest that they move on to the next task and return to it later.

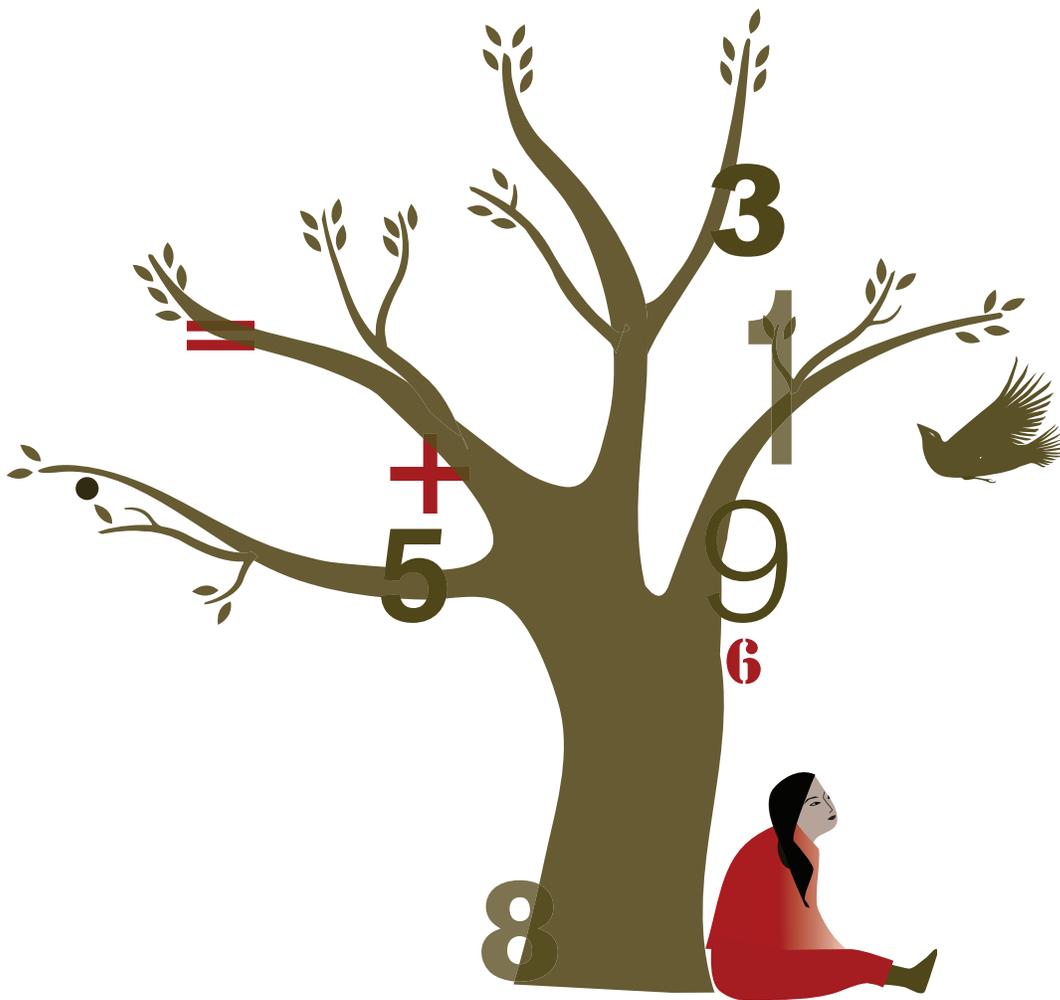
➤ Inform clients that you will review all the tasks and answers together once they have completed the assessment.

➤ While there is only one correct answer for each task, it is important to recognize that there may be more than one method of arriving at the right answer.

- Use the Results and Observations section following each assessment task to:
- record results;
 - identify the numeracy skills demonstrated; and
 - document any difficulties the client had in completing the tasks, such as using the wrong mathematical operation (e.g. using multiplication instead of division).

The Essential Skills Needs Assessment Summary Table included at the end of this booklet can be used to record all the results in one place and allows you to re-use the booklet for other clients.

- It is recommended that clients successfully complete a minimum of **7** of the **10** tasks to advance to the Numeracy Level 2 Booklet. For clients who do not achieve this minimum, you may wish to discuss what action(s) they would like to take to improve their numeracy skills as part of their training plan or job search (e.g. take a course to upgrade their estimation skills).



PART TWO

Client Introduction *(as it appears in the Numeracy Level 1: Client Booklet)*

Numeracy is the ability to use and understand numbers. Numeracy skills are important to be able to manage money and carry out transactions such as paying for a purchase or paying your bills. Numeracy skills are also used to measure and estimate, such as ingredients in a recipe or the size of a room.

You are about to complete a needs assessment for **Numeracy, Level 1**. This is **not** a test – it is an opportunity to help identify your numeracy skills strengths and areas you may want to consider improving. This information will help you to make decisions about job skills training and job searches.

Client Instructions *(as it appears in the Numeracy Level 1: Client Booklet)*

1. You will have an assessor present with you (i.e. an employment or career counsellors) while you complete the assessment. **Feel free to ask your assessor questions at any time.**
2. Each assessment question in this booklet describes or is drawn from a typical workplace task that shows how numeracy skills are used in different jobs in Canada.
3. The questions will be a combination of multiple-choice format and open-answer format:
 - For multiple-choice questions, you will be asked to choose one answer from the options provided. You can circle the letter that corresponds to the answer you choose or you can circle the answer itself.
 - For open-answer questions, you will be asked to write your answer in the space provided.
4. Space is provided in each question to write down notes as you work out your answers.
5. Please complete the numeracy questions without a calculator.
6. If you have difficulty answering a question, you can move on to the next task and return to it later.
7. Take your time to complete the questions – there is no set time limit.
8. You can take a break at any point during the assessment. You can also choose to stop the assessment and have the option to re-schedule for another time.
9. Once you have completed all the questions, or as many questions as you can, your assessor will review them with you.

Results and Observations Section:

Numeracy Task	One type of mathematical operation
Occupation	NOC 6611 – Cashiers
Numeracy Skill(s)	<input type="checkbox"/> Makes change by subtraction <input type="checkbox"/> Understands dollars and cents <input type="checkbox"/> Places decimals correctly
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	



Question 2:

A boilermaker monitors pressure gauges to ensure they are within a normal range. The normal operating range for water pressure is 25 to 35 psi (pounds per square inch). If the water pressure gauge reads 39 psi, by how much must it be reduced so that the psi reading is back within the normal range (35 psi)?

Answer: psi

Answer Discussion:

Formula:

Current psi reading – upper limit of normal range = minimum psi reduction required

$$39 \text{ psi} - 35 \text{ psi} = 4 \text{ psi}$$

$$\begin{array}{r} 39 \text{ psi} \\ - 35 \text{ psi} \\ \hline 4 \text{ psi} \end{array}$$

The pressure must be reduced by 4 psi to bring it back within the normal range (35 psi).

Results and Observations Section:

Numeracy Task	One type of mathematical operation
Occupation	NOC 7262 – Boilermakers
Numeracy Skill(s)	<input type="checkbox"/> Measurement and calculation Math <input type="checkbox"/> Takes measurement through one-step process and records the results
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	



Question 3:

A server is counting tips received during the day. The coins are shown in the illustration below. How much money is this in dollars?



Answer: **\$5.00**

Answer Discussion:

Formula:

A quarter is worth 25 cents (or \$0.25).

To figure out what 20 quarters are worth in dollars, multiply 20 by 0.25.

$$20 \times \$0.25 = \$5$$

$$\begin{array}{r} \$0.25 \\ \times 20 \\ \hline \$5.00 \end{array}$$

Add 2 decimal places (because there are two decimal places in 0.25) from the right = 5.00. The answer is \$5.00.

or

There are four quarters in every dollar (4 quarters = \$1.00).

Divide the number of quarters by 4 to calculate the total amount in dollars.

$$20 \div 4 = \$5$$

or

Use the illustration to count by increments of 25 (i.e. 0.25, 0.50, 0.75, 1.00, 1.25, 1.50 etc.)

Results and Observations Section:

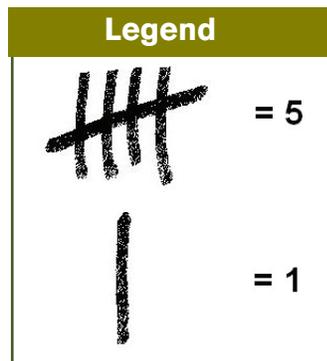
Numeracy Task	Simple operation (addition or multiplication)
Occupation	NOC 6453 – Food and Beverage Servers
Numeracy Skill(s)	Money Math: <input type="checkbox"/> Counts change using addition or division or multiplication <input type="checkbox"/> Uses whole numbers by converting cents to dollars <input type="checkbox"/> Places decimals correctly
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 4:

A radio operator for a bus company calculates the total number of calls made each week for tow trucks. The operator uses ticks (or lines) to record the number of calls made in the weekly call log.



According to the call log above, what was the total number of calls made? Use the legend below to help you calculate the total.



Answer: **13** calls

Answer Discussion:

Each tick or line represents one call.

As noted in the legend, four ticks with a horizontal line through it () represents 5 calls.

There are two groups of five calls, plus three additional ticks.

$$2 \times 5 = 10$$

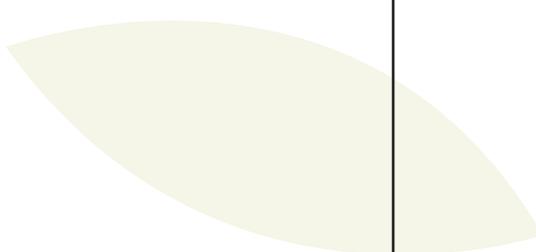
$$10 + 3 = 13$$

or

Count each of the tick marks.



Results and Observations Section:

Numeracy Task	Simple operation One type of mathematical operation
Occupation	NOC 1475 – Dispatchers and Radio Operators
Numeracy Skill(s)	Measurement and Calculation Math: <input type="checkbox"/> Adding whole numbers
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 5:

A printing machine operator needs to reduce the size of a picture before printing copies. The original size of the picture is 5 inches wide by 7 inches long. If the customer would like to make the picture 1 inch shorter in length and width, what will the new measurements be?



Answer: **4** inches wide by **6** inches long

Answer Discussion:

Since the length and the width need to be reduced by 1", then the operator needs to subtract 1 inch from 5 inches (width) and 1 inch from 7 inches (length).

$$5 - 1 = 4 \text{ inches (width)}$$

$$7 - 1 = 6 \text{ inches (length)}$$

The new measurements will be 4 inches wide by 6 inches long.

Results and Observations Section:

Numeracy Task	Simple operation Operation clearly specified One type of mathematical operation
Occupation	NOC 9471 – Printing Machine Operators
Numeracy Skill(s)	Measurement and Calculation Math: <input type="checkbox"/> Subtracts whole numbers
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 6:

A plumber asks his helper to order a piece of pipe for a sink installation. Before he orders the part, the helper calls four different stores to find the lowest price.

Sam's Hardware: \$3.29
Save-a-lot: \$2.99
PlumberMart: \$4.70
Pipetastic: \$3.10

Based on the prices listed above, which store offers the lowest price for the piece of pipe?
Circle the correct answer.

- A. Sam's Hardware
- B. Save-a-lot
- C. PlumberMart
- D. Pipetastic

Answer: B

Answer Discussion:

The lowest price out of the four options is \$2.99 at Save-a-lot.

Results and Observations Section:

Numeracy Task	Simple operation
Occupation	NOC 7611 – Plumber's Helpers (Construction Trades Helpers and Labourers)
Numeracy Skill(s)	Scheduling or Budgeting and Accounting Math: <input type="checkbox"/> Makes simple comparisons of decimal numbers
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 7:

A hotel front desk clerk is taking a room reservation over the telephone. The clerk refers to a daily vacancy report to see which rooms are available. According to the report shown below, which type of room is not available?

Room Vacancy Report, June 12

Room Type	Number
Available:	
Single Queen with patio	1
Single Queen with lake view	3
Double Queen	0
King	2

- A. Single Queen with patio
- B. Single Queen with lake view
- C. Double Queen
- D. King

Answer: C

Answer Discussion:

The report shows that the only room type with no rooms available is the Double Queen since there is a “0” (zero) under the ‘Number Available’ section.

Results and Observations Section:

Numeracy Task	Simple operation
Occupation	NOC 6435 – Hotel Front Desk Clerks
Numeracy Skill(s)	Data Analysis Math: <input type="checkbox"/> Makes simple comparisons of whole numbers
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 8:

A kitchen helper is checking inventory in the storage room. The helper notices that there is only one opened jar of peanut butter on the shelf. It is shown in the illustration below.

Approximately how much peanut butter is left in the jar?



Answer: **500** ml

Answer Discussion:

The label on the jar of peanut butter indicates that it holds 1000ml. Since the jar appears to be half full, it can be estimated that the remaining peanut butter in the jar is about one-half of 1000ml which is equal to 500ml.

Results and Observations Section:

Numeracy Task	Estimation Procedure is defined One factor (by eyeballing) All information available No precision required
Occupation	NOC 6641 – Food Counter Attendants, Kitchen Helpers and Related Occupations
Numeracy Skill(s)	Numerical Estimation: <input type="checkbox"/> Estimates by comparing with known quantity <input type="checkbox"/> Uses whole numbers to measure
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 9:

A construction worker needs to prepare a concrete mixture using the following ratio of cement and sand:

Standard Concrete Mixture Ratio

1 part cement

3 parts sand

If the worker needs to double the amount of concrete, what will the new ratio be?

Answer: **2** parts cement and **6** parts sand

Answer Discussion:

The worker needs to “double” the amount of concrete; therefore, the worker should multiply the quantity of cement and sand by 2.

$$2 \times 1 \text{ (part cement)} = 2 \text{ parts cement}$$

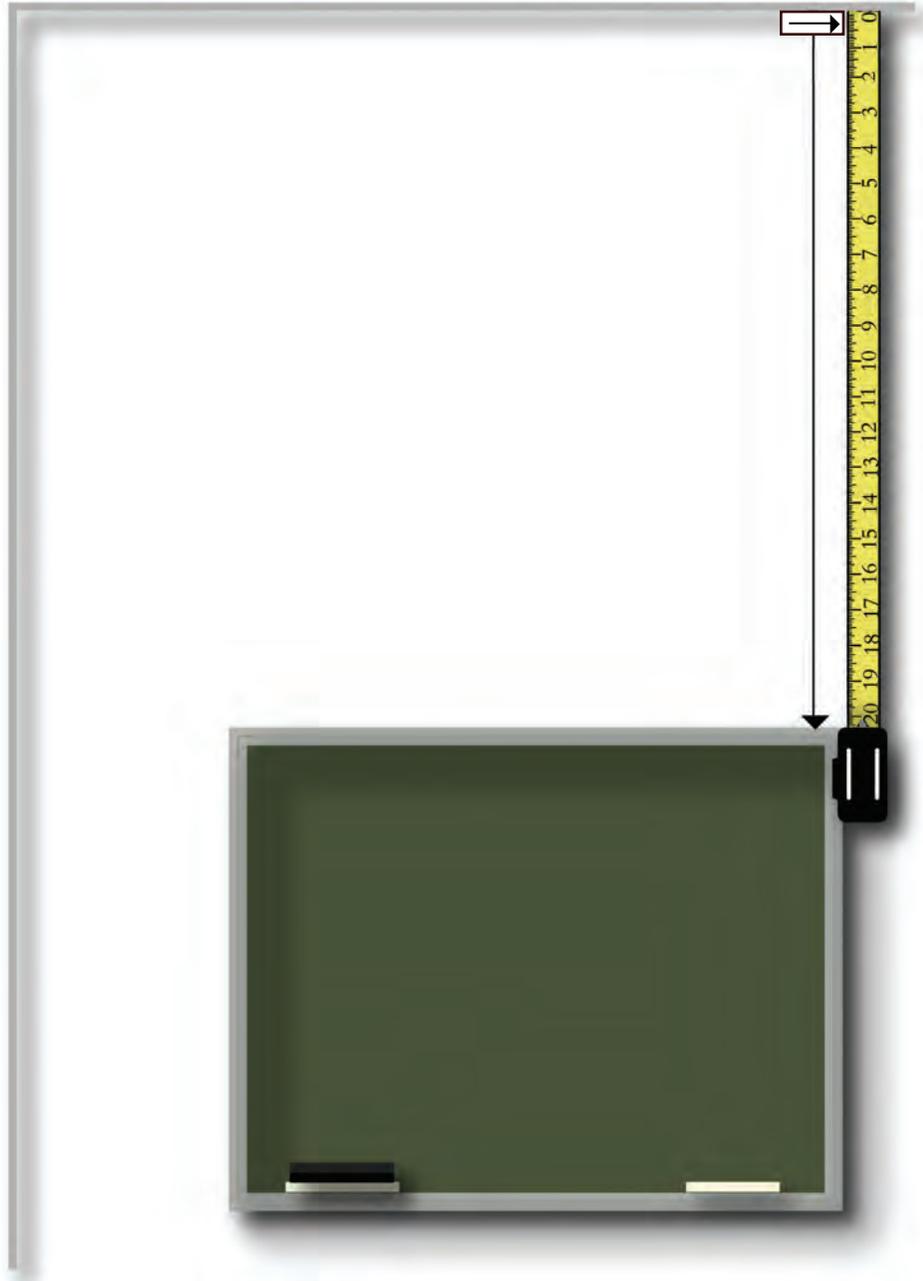
$$2 \times 3 \text{ (parts sand)} = 6 \text{ parts sand}$$

Results and Observations Section:

Numeracy Task	Simple operation One type of mathematical operation Minimal translation
Occupation	NOC 7611 – Construction Trades Helpers and Labourers
Numeracy Skill(s)	Measurement and Calculation Math: <input type="checkbox"/> Identifies the factor required to complete the ratio <input type="checkbox"/> Multiplies amounts by the factor
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

Question 10:

A painter needs to measure the height of a chalkboard before removing it to paint the wall. The painter must measure the distance from the ceiling to the top of the chalkboard so that it can be re-hung at the same height after the paint is dry. Use the illustration below to determine the distance from the top of the chalkboard to the ceiling.



Answer: **20** inches

Answer Discussion:

The measuring tape shows that the distance between the ceiling and the top of the chalkboard is 20 inches.

Results and Observations Section:

Numeracy Task	Simple operation One type of mathematical operation that is clearly specified
Occupation	NOC 7294 – Painters and Decorators
Numeracy Skill(s)	Measurement and Calculation Math: <input type="checkbox"/> Take measurements through a one-step process and record the results
Did the client successfully complete the task?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance Comments:
Additional Observations	

ESSENTIAL SKILLS NEEDS ASSESSMENT SUMMARY

Use this **Essential Skills Needs Assessment Summary** table to conveniently record all the results in one place. The Summary can be shared with other intermediaries such as adult educators and skills trainers that can support the employment and training needs of the client. Written consent **must** be obtained from the client before sharing any of the assessment results.

Booklet: _____ Level: _____

Date of Assessment: _____

Location of Assessment: _____

Assessor Name: _____

Candidate Name: _____

Question 1	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 2	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 3	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 4	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 5	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 6	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 7	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 8	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 9	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

Question 10	
Did the client complete the task successfully?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Did not attempt <input type="checkbox"/> Required assistance
Observations:	

I, _____, authorize my counsellor to share results of the Essential Skills needs assessment with anyone who is willing to assist me with my employment and training goals.

These results were collected through an informal Essential Skills Needs Assessment process and do not provide formal assessment scores. They are intended to be used to support employment and career counsellors to engage clients in a discussion about training objectives, such as skills upgrading programs. For more information, please refer to the Introduction to an Essential Skills Needs Assessment tool available at hrsdc.gc.ca/essentialskills.