

National Career Readiness Certificate Competencies

The Applied Mathematics assessment portion of the NCRC measures the skills people use when they apply mathematical reasoning and problem-solving techniques to work-related problems.

Individuals with **Level 3** skills can:

- ✓ Solve problems that require a single type of mathematics operation (addition, subtraction, multiplication, and division) using whole numbers
- ✓ Add or subtract negative numbers
- ✓ Change numbers from one form to another using whole numbers, fractions, decimals, or percentages
- ✓ Convert simple money and time units (e.g., hours to minutes)

Individuals with **Level 4** skills can:

- ✓ Solve problems that require one of two operations
- ✓ Multiply negative numbers
- ✓ Calculate averages, simple ratios, simple proportions, or rates using whole numbers and decimals
- ✓ Add commonly known fractions, decimals, or percentages (e.g., $\frac{1}{2}$, .75, 25%)
- ✓ Add three fractions that share a common denominator
- ✓ Multiply a mixed number by a whole number or decimal
- ✓ Put the information in the right order before performing calculations

Individuals with **Level 5** skills can:

- ✓ Decide what information, calculations, or unit conversions to use to solve the problem
- ✓ Look up a formula and perform single-step conversions within or between systems of measurement
- ✓ Calculate using mixed units (e.g., 3.5 hours and 4 hours 30 minutes)
- ✓ Divide negative numbers
- ✓ Find the best deal using one and two step calculations and then comparing results
- ✓ Calculate perimeters and areas of basic shapes (rectangles and circles)
- ✓ Calculate percentage discounts or markups

Individuals with **Level 6** skills can:

- ✓ Use fractions, negative numbers, ratios, percentages, or mixed numbers
- ✓ Rearrange a formula before solving a problem
- ✓ Use two formulas to change from one unit to another within the same system of measurement
- ✓ Use two formulas to change form one unit in one system of measurement to a unit in another system of measurement
- ✓ Find mistakes in items that belong at Levels 3, 4, and 5

- ✓ Find the best deal and use the result for another calculation
- ✓ Find areas of basic shapes when it may be necessary to rearrange the formula, convert units of measurements in the calculations, or use the result in further calculations
- ✓ Find the volume of rectangular solids
- ✓ Calculate multiple rates

Individuals with **Level 7** skills can:

- ✓ Solve problems that include nonlinear functions and/or that involve more than one unknown
- ✓ Find mistakes in Level 6 items
- ✓ Convert between systems of measurement that involve fractions, mixed numbers, decimals, and/or percentages
- ✓ Calculate multiple areas and volumes of spheres, cylinders, or cones
- ✓ Set up and manipulate complex ratios or proportions
- ✓ Find the best deal when there are several choices
- ✓ Apply basic statistical concepts

The Reading for Information assessment measures the skill people use when they read and use written text in order to do a job. The written texts include memos, letters, directions, signs, notices, bulletins, policies, and regulations. The test is made up of multiple-choice questions based on reading passages that reflect actual reading demands of the workplace.

Individuals with **Level 3** skills can:

- ✓ Identify main ideas and clearly stated details
- ✓ Choose the correct meaning of a word that is clearly defined in the reading
- ✓ Choose the correct meaning of common, everyday, and workplace words
- ✓ Choose when to perform each step in a shorts series of steps
- ✓ Apply instructions to a situation that is the same as the one in the reading materials

Level 3 reading materials include basic company policies, procedures, and announcements. They are short and simple with no extra information. Examinees read the materials to find out what they should do.

Individuals with **Level 4** skills can:

- ✓ Identify important details that may not be clearly stated
- ✓ Use the reading materials to figure out the meaning of words that are not defined
- ✓ Apply instruction with several steps to a situation that is the same situation in the reading materials
- ✓ Choose what to do when changing conditions call for different actions (follow directions that include “if-then” statements)

Level 4 reading materials include company policies, procedures, and notices. They are straightforward, but have longer sentences and contain a number of

details. These materials use common words, but do have some more complex words as well. They describe procedures **that contain** several steps and when following the procedures, individuals must think about changing conditions that affect what they should do.

Individuals with **Level 5** skills can:

- ✓ Figure out the correct meaning of a word based on how the word is used
- ✓ Identify the correct meaning of an acronym that is defined in the document
- ✓ Apply technical terms and jargon and relate them to stated situations
- ✓ Apply straightforward instructions to a new situation that is similar to the one described in the material
- ✓ Apply complex instructions that include conditionals to situations described in the materials

Individuals with **Level 6** skills can:

- ✓ Identify implied details
- ✓ Use technical terms and jargon in new situations
- ✓ Figure out the less common meaning of a word based on the context
- ✓ Apply complicated instructions to new situations
- ✓ Figure out the principles behind policies, rules, and procedures
- ✓ Apply general principles from the materials to similar and new situations
- ✓ Explain the rationale behind a procedure, policy, or communication

Level 6 reading material includes elaborate procedures, complicated information, and legal regulations found in all kinds of workplace documents. The instructions utilize complicated sentences with difficult words, jargon, and technical terms. Most of the information needed to answer the questions is not clearly stated.

Individuals with **Level 7** skills can:

- ✓ Figure out the definitions of difficult, uncommon words based on how they are used
- ✓ Figure out the meaning of jargon or technical terms based on how they are used
- ✓ Figure out the general principles behind the policies and apply them to situations that are quite different from any described in the materials

Level 7 reading materials are very multifarious. The information includes a lot of details, and the concepts are complicated. The vocabulary is difficult. Unusual jargon and technical terms are used, but they are not defined. The writing often lacks clarity and direction, forcing the reader to draw conclusions from some parts of the reading in order to apply them to other parts.

Locating Information measures the skill people use when they work with workplace graphics such as charts, graphs, tables, forms, flowcharts, diagrams, floor plans, maps, and instrument gauges. Examinees are asked to find information in a graphic or insert information into a graphic. They must also summarize and analyze information found in related graphics.

Individuals with **Level 3** skills can:

- ✓ Find one or two pieces of information in a graphic
- ✓ Fill in one or two pieces of information that are missing from a graphic

Graphics used: Simple order forms, bar graphs, tables, flowcharts, maps, instrument gauges, or floor plans.

Individuals with **Level 4** skills can:

- ✓ Find several pieces of information in one or more graphics
- ✓ Understand how graphics are related to each other
- ✓ Summarize information from one or more straightforward graphics
- ✓ Identify trends shown in one or more straightforward graphics
- ✓ Compare information and trends shown in one or more straightforward graphics

Graphics used: Basic order forms, diagrams, line graphs, tables, flowcharts, instrument gauges, or maps. Examinees may work with one or two graphics at a time.

Individuals with **Level 5** skills can:

- ✓ Sort through distracting information
- ✓ Summarize information from one or more detailed graphics
- ✓ Identify trends shown in one or more detailed or complicated graphics
- ✓ Compare information and trends from one or more complicated graphics

Graphics used: The graphics are complicated and sometimes in a less common format (such as a three-dimensional bar graph). They may be detailed forms, tables, graphs, diagrams, maps, or instrument gauges.

Individuals with **Level 6** skills can:

- ✓ Draw conclusions based on one complicated graphic or several related graphics
- ✓ Apply information from one or more complicated graphics to specific situations
- ✓ Use the information to make decisions

Graphics used: The graphics are very complicated and contain large amounts of information with challenging formats (such as a wiring diagram, airplane control chart, or contour map). They may be very detailed graphs, charts, tables, forms, maps, and diagrams. Examinees may work with one or more graphics at a time, and the connections between the graphics may be subtle.

WorkSource is an equal opportunity employer/program. Auxiliary aids and services available upon request to individuals with disabilities. To place a free relay call in Oregon dial 711. This program financed in whole or in part with funds provided by the U.S. Department of Labor.