

## APPLIED MATHEMATICS

## READING FOR INFORMATION

## LOCATING INFORMATION

### Level 3

- Solve problems that require a single type of mathematical 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)

### Level 3

- 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 short series of steps
- Apply instructions to a situation that is the same as the one in the reading materials

### Level 3

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

### Level 4

- Solve problems that require one or 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 information in the right order before performing calculations

### Level 4

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

### Level 4

- 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

### Level 5

- 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

### Level 5

- 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
- Identify the paraphrased definition of a technical term or jargon 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

### Level 5

- 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

### Level 6

- 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 and different systems 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 measurement in the calculations, or use the result in further calculations
- Find the volume of rectangular solids
- Calculate multiple rates

### Level 6

- 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

- 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

### Level 7

- 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

### Level 7

- 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