TALENT SKILLS ASSESSMENT (TSA)

PREPARATION GUIDE

Provided by the TABEC, the Training Advisory Board Executive Committee
Jointly sponsored by the Verizon Corporation and the Communications Workers of America (CWA)

READ THIS DOCUMENT FIRST

TALENT SKILLS ASSESSMENT (TSA) PREPARATION GUIDE

INTRODUCTION AND INSTRUCTIONS

INTRODUCTION TO THE TSA AND TSA PREP COURSE

Welcome to the Talent Skills Assessment (TSA) Preparation course. You have everything you need in this package to complete the preparation course. You will not need to return tests to the FutureLink Home Study office for scoring because any practice items and check-ups you complete in the test-prep materials will include answer keys.

The TSA was implemented as the primary screening for all Associate positions effective on August 31, 2009, replacing the Universal Test Battery-Revised (UTB-R).

The TSA preparation course should be helpful to you in: learning more about the test, providing instruction about the content of the TSA, and providing you some practice problems to help you improve your accuracy and speed.

There is no guarantee that completing the TSA preparatory materials will ensure that you qualify on the actual TSA; success on any company qualifications test depends upon many factors. Utilizing the preparation tools available to you will increase your chances for success relative to not utilizing the materials.

Below is a list of the course objectives. These objectives tell you what you will be able to do at the conclusion of the course:

COURSE OBJECTIVES

- You will name the subtests on the TSA.
- You will complete skills inventories in math and reading to determine your current skill levels and your next steps for developing additional skills.
- You will solve basic computational problems with whole numbers, fractions, decimals, and percents.
- You will learn strategies and tools for improving reading comprehension.
- You will improve your reading comprehension.
- You will locate and understand information presented in tables.
- You will make valid and logical decisions based upon a set of facts and determine if conclusions are true, false, or cannot be determined based upon the information provided.
- You will check the accuracy of a given list by comparing it to a master list.
- You will improve your test-taking abilities by learning test-taking taking tips and techniques.
- You will identify resources for additional preparation, if needed.

Here is some general information about the TSA. It is important to read this thoroughly and carefully so that you learn everything you need to know about the Talent Skills Assessment.

INFORMATION ABOUT THE TALENT SKILLS ASSESSMENT (TSA)

1. The Talent Skills Assessment (TSA) replaces the Universal Test Battery (UTB-R). The TSA contains nine subtests and measures basic skills, abilities, and characteristics that are key elements of performing well in Associate jobs at Verizon. The tests are administered at computer stations in a proctored setting. It takes approximately 50 minutes to complete the 116 items on the TSA.

2. There are five cognitive subtests and four non-cognitive subtests on the TSA. They are organized into the following sections.

   Math Computation: This subtest has similar content to the UTB-R subtest, Math Computation, though the actual test items differ. You will be asked to solve computations with whole numbers, fractions, decimals, and percents. There will not be word problems or problems requiring algebra or geometry. (15 items)

   Reading Comprehension: This subtest is much like the Reading Comprehension subtest on the UTB-R though the actual test items are different. You will be asked to read passages and respond to questions about these passages. (8 items)

   Table Interpretation: This subtest was not a subtest on the UTB-R. You will be given tables of information and then asked to locate and interpret information presented within the tables. (21 items)

   Reasoning: This subtest on the TSA measures verbal reasoning, which is different from the non-verbal reasoning subtest on the UTB-R. This subtest asks you to make valid and logical decisions based upon a set of facts. You will be asked to determine whether each conclusion is true, false, or cannot be determined based upon the facts. (8 items)

   Checking for Accuracy: This subtest measures skills similar to those on the Clerical Speed and Accuracy subtest on the UTB-R. On the Checking for Accuracy subtest, you will be asked to check the accuracy of a list by comparing it to a master list that is correct You will be asked to determine if there are differences between the line items on the list, and if so, how many. (20 items)

   Background Inventory: Included in the Background Inventory are four non-cognitive subtests measuring these personal characteristics:
   Drive
   Conscientiousness
   Flexibility
   Interpersonal Skills
   (These four non-cognitive subtests contain a total of 44 items.)

3. While the TSA is the primary screening instrument for Associate positions, many specific positions require secondary tests, as was the case when the UTB-R was in effect. Some secondary tests may have changed. You may want to talk with your supervisor and/or visit the FutureLink website for additional information about secondary test requirements. You may also want to talk with a FutureLink Career Advisor. You can call 1-800-497-LINK or visit the FutureLink website to do so. The FutureLink website also provides information about testing at Verizon, including secondary tests.

4. The TSA was developed to ensure that each test is job related, fair, and accurate. This was accomplished by working closely with a large number of job experts. In addition, a study was conducted and showed that the TSA is indeed a valid and reliable predictor of job performance and that it is fair to all candidates. Qualifications tests such as the TSA allow candidates to be screened fairly as opposed to more subjective ways of screening job candidates.

5. On the TSA, there are no longer job families as there were with the UTB-R.

6. As you read in #2, in addition to the five cognitive subtests, there is a Background Inventory. The Background Inventory is similar to the Candidate Ability and Background Life Experience (CABLE) that was part of the UTB-R. The Background Inventory includes the four non-cognitive subtests. There is no preparation for this part in this course, and none is required. Answer these items honestly when you take the TSA.

7. The total score that you receive on the TSA includes the cognitive subtests and the non-cognitive subtests comprising the Background Inventory. There is a total of 116 items on the TSA, and 44 of these items are test items from the four non-cognitive subtests; therefore, both the cognitive and non-cognitive subtests are important.

8. Because you may not use a calculator on the test, you should not use a calculator in this home study course.

9. Here's the best advice on guessing versus not guessing: there is no penalty for wrong answers so you should answer as many items as you can. That said, if you cannot determine the answer, narrow the options through the process of elimination. You should try to answer every problem as there is no penalty for guessing and your score is based on the number of correct answers. Do your best and always try rather than leave an answer blank.

One of the components in this preparatory course is the TSA Test Preview. Now is a good time for you to read through the TSA Test Preview to learn more about the subtests and the types of problems and level of difficulty of the TSA. It will probably take you only about 10-15 minutes to complete the preview.

GO TO THE NEXT PAGE TO BEGIN THE TSA PREVIEW.

TALENT SKILLS ASSESSMENT (TSA) TEST PREVIEW

Prerequisite Skills and Abilities for Taking This Test

This test is computer administered under strictly timed conditions. It may require the following: Sitting for more than 30 minutes, performing physical actions involved in reading information on a computer screen and using a computer mouse and/or keyboard (e.g., moving arms, wrists, hands, fingers, neck, and head), and seeing and comprehending written material (e.g., numbers, words, graphics, phrases, directions for completing the test) on a computer screen.

If you need any test accommodations consistent with the Americans with Disabilities Act (ADA), please contact Verizon's test accommodations group via e-mail at: ada@aoncons.com prior to the administration of this test.

Test Preview

The purpose of this Test Preview is to provide candidates with an overview of what to expect during the testing process. This is important because it helps prepare candidates for the actual test-taking environment.

What Is the TSA?

The TSA is the primary selection test for virtually all Associate titles throughout Verizon. The TSA is a computer-administered test that consists of five (5) cognitive subtests and four (4) non-cognitive subtests. The five cognitive subtests measure Math Computation, Reading Comprehension, Table Interpretation, Reasoning, and Checking for Accuracy. The four non-cognitive subtests measure Drive, Conscientiousness, Flexibility, and Interpersonal Skills.

The TSA is a multiple-choice test that contains 116 items and takes approximately 50 minutes to complete

Why Use the TSA?

The TSA allows Verizon to systematically evaluate each candidate based on the same set of requirements. This "common yardstick" measuring approach provides a fair and unbiased way of identifying those candidates who are likely to perform well in Associate positions.

The use of validated job-related employment tests is one way Verizon ensures that all individuals are selected based on the requirements of the job and not based on unrelated factors such as race, color, age, religion, gender, national origin, veteran status, or disability. All employees are selected based on how well they meet the requirements of the job.

What Knowledge, Skills, and Abilities Are Measured in the TSA?

Math Computation

This subtest measures your ability to solve basic math problems. It requires you to add, subtract, multiply, and divide numbers and then choose the correct answer. There are 15 items in this subtest.

SAMPLE PROBLEM

210 - 75 =

A. 125 C. 145
B. 135 D. 130

The correct answer is B because 210 minus 75 equals 135.

Reading Comprehension

These items measure your ability to read and understand passages of material. There may be a variety of types of passages (e.g., descriptions of historic events, company memos, and letters). You are to read the passage and then answer a series of questions about the information it contained. There are a total of 8 questions in this section.

SAMPLE PROBLEM

Medical expenses have become a major concern for American businesses. Medical expenses for many companies have doubled in the last five years. Unnecessary health care costs reduce the amount of money available for other business needs and employee benefits. Employees can help control health care costs by doing the following: adopting a healthy lifestyle, asking their doctors about costs of services, and getting second opinions from other doctors before having expensive treatments.

For many companies, how much have medical expenses increased in the last five (5) years?

A. They have tripled.
B. They have doubled.
C. They are the same.
D. They have decreased.

The correct answer is B.

Table Interpretation

The questions in this section assess your ability to locate and understand information using tables. There are 21 items in this section.

SAMPLE PROBLEM

Order List for Westfield Garden Apartments, August 3				
Order #	Customer Address	Customer #	Services Ordered	Length of Cable Needed
105	APT 37 Bldg C	8872182	Data Only	39 FT
106	APT 38 Bldg D	9855425	Triple Play	72 FT
107	APT 15 Bldg C	4156659	Triple Play	15 FT

1) What is the length of cable needed for order number 106?
   A. 15 FT
   B. 39 FT
   C. 72 FT

   The answer is C., 72 FT. You need only locate the answer on the table.

2) What is the total length of cable needed for the Triple Play orders?
   A. 15 FT
   B. 87 FT
   C. 57 FT

The answer is B., 87 FT. This question requires that you find two pieces of data on the table (the two orders for Triple Play services) and add them for a total sum of cable.

Reasoning

These items measure your ability to draw conclusions based on facts. For each item, you will determine the accuracy of the conclusion based on the facts given. There are 8 items in this section.

SAMPLE PROBLEM

FACTS
Pat and all of her neighbors have FiOS.
Jessica has FiOS.
Jessica lives in Springfield.

1. Jessica and Pat are neighbors.
A. True
B. False
C. Can't Tell

The answer is C. Based on the above facts you cannot conclude whether or not Jessica and Pat are neighbors, only that they both have FiOS.

2. Pat's neighbor does not have FiOS.
A. True
B. False
C. Can't Tell

The answer is B. Based on the initial facts, we know that all of Pat's neighbors have FiOS. Therefore, statement #2 is false.

Checking for Accuracy

In this section, you will check the accuracy of a list by comparing it to a master list, or "Correct List." You will be asked to compare the lists and to identify the number of sections that have errors in the "List to be Checked." There are 20 items in this section.

Response Options:			
A = 0 sections	B = 1 section	C = 2 sections	D = 3 sections

	Correct List			**List to Be Checked**		
	Code	Start Date	End Date	Code	Start Date	End Date
1.	HNT-10214	10/11/2001	10/11/2002	HNT-10214	10/11/2001	10/11/2002
2.	SRB-12654	3/3/2003	1/28/2008	SRB-12654	3/3/2003	3/3/2003
3.	MLL-12875	7/8/2007	8/10/2007	MLL-12800	7/28/2000	8/2/2007

1. There are no errors; the entry in the List to be Checked is exactly the same as the entry in the Correct List. The correct answer is choice A (0 sections).

2. There is an error in 1 section. The End Date in the List to be Checked does not match the End Date in the Correct List. The correct answer is choice B (1 section).

3. There are errors in all 3 sections. The Code, Start Date, and End Date in the List to be Checked are all different from the corresponding sections in the Correct List. The correct answer is choice D (3 sections).

Personal Characteristics, Background and Life Experiences

In this subtest, there are 44 items for you to answer about your background, experiences, and opinions. This section measures Drive, Conscientiousness, Flexibility, and Interpersonal Skills.

How to Prepare for the TSA

No formal preparation is required. However, taking practice test questions is recommended.

Doing Your Best on Verizon Tests

- *Feeling Well:* Candidates who are not feeling well before the test begins, or candidates who have a reason to believe that they will not be able to do their best on the test are responsible for notifying their Human Resources Representative to reschedule a new test date. Once a test starts it must be scored, and the standard re-test period must expire before the test can be retaken.

- *Attending the Test Rested and Ready:* Candidates should get a good night's sleep before the test so they are at their peak alertness during the test.

- *Understanding the Instructions:* Read the test instructions closely before beginning.

Now that you've completed the TSA Test Preview, you're ready to begin working with the TSA Prep Guide. To experience the greatest benefit from the preparation material, read the following tips about how to make the most of the Guide.

TIPS ABOUT USING THIS PREP GUIDE

1. Read all general information about the TSA. If you have questions about the TSA, contact your FutureLink Career Advisor, visit the FutureLink website, and/or talk with your supervisor.

2. Complete all assessments:
   - Reading Skills Inventory – Levels 1 and 2
   - Reading Skills Inventory – Comprehension Passage
   - Reading Skills Inventory – Timed Reading
   - Math Skills Inventory

   Reading Skills Inventory – Levels 1 and 2: This will help you understand your current reading strengths by asking you to complete reading passages by choosing the missing words.

   Reading Skills Inventory – Comprehension Passage: This will help you assess your reading comprehension skills and identify those specific reading skills with which you need more help.

   Timed Reading: This will help you understand more about your reading rate (speed) and if you need to seek assistance improving your reading speed and efficiency.

   Math Skills Inventory: This will help you understand the areas of math computation in which you need to focus more and those in which you are already skillful.

   At the end of each inventory is an answer key and instructions for scoring your results. In most cases, you will be advised as to whether you need additional study in the area.

3. Work in Mastering Math, the math text included with these material, as often as you can. Do so regularly in order to be able to complete your objectives and maintain continuity. Complete all math problems that you need to do based upon the results of your Math Skills Inventory, always checking your answers with the answer keys. Checking your answers will help you stay on the right track and prevent you from repeating mistakes.

4. Work in the Reading Comprehension section in your TSA Student Workbook. Complete all the reading comprehension exercises, always checking your answers with the answer keys.

5. Complete the instructions and practice in the TSA Student Workbook for the three new cognitive subtests: Table Interpretation, Reasoning, and Checking for Accuracy. Pay careful attention to the instructions. Within them, there are always some tips and techniques given to help you solve the problems successfully. Always check answers with the answer keys to be sure you are on the right track.

6. Remember that both speed and accuracy count on the practice exercises as well as on the actual subtests on the TSA. Few exercises in this workbook have time limits; however, you should always push yourself to work quickly and accurately. If you have a timer, use it while you practice. Train yourself to work more quickly without compromising accuracy.

7. At the end of each module are Developmental Suggestions that point you in the direction of other activities you might do to obtain additional help with this topic. Suggestions include face-to-face and online courses, other books, etc. If you need more practice, follow up using these suggestions.

You have now completed the Introduction and Instructions for the TSA Preparation Guide. Be sure to complete the inventories, check your answers with the answer keys, and interpret your results as indicated. Then, begin your work in the TSA Student Workbook and the text Mastering Math.

TALENT SKILLS ASSESSMENT (TSA)

PREPARATION GUIDE

Student Workbook

Provided by the TABEC, the Training Advisory Board Executive Committee
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Table of Contents

MODULE 1: READING COMPREHENSION

This module presents general strategies designed to help you understand material contained within short reading passages. Each of the following topics will be discussed in the sections that follow:

- General Reading Strategies
- Understanding the Meaning of Words
- Concentrating, Visualizing, Organizing, Reviewing
- Finding the Main Idea
- Using Signal Words
- Critical Thinking Skills

In addition, you will be able to practice these skills and strategies with passages much like those on the Reading Comprehension subtest of the TSA.

General Reading Strategies

Overall, your goal in the TSA Reading Comprehension subtest is to quickly read and understand the information conveyed by a short passage. Always be sure to read the entire passage, and while you want to be fast, you do not want to sacrifice accuracy for speed.

In terms of reading, first know that in their writings, authors typically lead readers to a certain end, or a conclusion. To draw a conclusion, the reader must:

- Read the whole paragraph.
- Keep the facts in mind.
- Think about what the facts say.
- Come to a decision about the paragraph's meaning based on facts and other cues in the text.

Technical material has a great deal of information and ideas packed together, often making it difficult to grasp it all with just one reading. On occasion, you may find that you have to reread a section several times in order to grasp the meaning. Most people find this to be the case with technical texts.

That said, focus your attention on what you are reading. The reading material on the TSA, much like most technical reading, is often not as interesting as reading a story.

Understanding the Meaning of Words

In the TSA, you may encounter unfamiliar terms. You often need to be able to understand these terms in order to understand the information you are reading.

Definitions Are Sometimes Provided

- Look for definitions as you are reading.
- Pause to think about them when you need to.
- A term could be defined in just a short phrase set off by commas, or it could be defined in a complete sentence, or even several paragraphs.

Look for Context Clues

Context clues provide another way to figure out what words mean. Because new words are not always clearly defined, sometimes you must figure out what a word means by using the words around them.

A difficult word may be explained by the words or sentences just before or after it, as in this sentence:

> "Ninety-two of these are natural elements; the remainder are not found in nature. They are man-made, resulting from atomic experimentation."

You may not know at first what is meant by natural elements, but when you read the rest of the sentence, you learn that they are elements found in nature, elements not made by man. Remember, when confronted with a new word, always look at its context, the other parts of the sentence, for clues as to its meaning.

Concentrating, Visualizing, Organizing, Reviewing

Here are four steps to improving your reading comprehension:

1. ***Concentrate:*** Concentration means focusing your attention on one thing only, eliminating thoughts of everything else.
   - Practice: When your mind wanders, bring it back to the item upon which you are focusing.
   - Summarize: Mentally summarizing what you have just read can help to focus your mind.

2. ***Visualize:*** As you read, try to picture in your mind what you are trying to understand. Relate the information to a mental image.

3. ***Organize and Relate What You Know:*** Organization plays an important role in reading comprehension. As you read, try to associate facts that you encounter with the main idea and think about how they relate to what you are trying to learn from the paragraphs. Try to make connections between individual facts and larger concepts.

4. ***Review:*** Go over what you've read in order to improve your understanding. Don't expect to always learn or understand everything from the initial reading. Reread in order to reinforce what you've learned and to pick up information you may have missed in the first reading.

Finding the Main Idea

Being able to find the main idea is important when reading anything. When you can find the main idea, you understand the point that the author is making. Here are some things to consider when trying to find the main idea in a paragraph.

- *Look for the Topic Sentence:* Every well-written paragraph has a main idea that is stated in the topic sentence. The paragraph is built around this main idea. Remember that the topic sentence is not always the first sentence of the paragraph.
- *Understand Stated Versus Implied:* The main idea may be directly stated or it may be implied. When it is implied, the author suggests the idea to the reader through information in the passage, and the reader must add up the details given by the author in order to determine the main idea.
- *Find the Topic/Subject:* To find the main idea, first find the topic or subject matter. Writers usually write about people, things, or concepts. Who or what they write about is the topic. Once you have determined the topic, ask yourself, "What point is the author trying to make about this topic?"

- *Review Supporting Sentences:* Once you have found the main idea, look at the other sentences in the paragraph. These sentences support the main idea or explain it further. They contain details that support the main idea by providing facts, opinions, examples, illustrations, dates, and sometimes analogies. The details will not all be of equal importance. You must evaluate the details given and decide if they prove the author's point.

Using Signal Words

Sometimes the material that you read can be very difficult, and you may have problems determining the relevant content. In these cases, try identifying signal words.

Using signal words is something you normally do unconsciously. Learning to use them consciously empowers you with one more way to understand the meaning of a paragraph.

Signal words make the connections between the details that support the main idea. They show the relationship between the details.

Signal words serve two important functions:

- They lead the reader to important ideas.
- They allow the reader to anticipate what information is coming.

For example, consider a case in which you read a detail that supports the main idea, and the next word is "however." You know that the information coming up is going to contradict the statement you just read. The word "however" is a "reversing-the-thought" signal word.

There are four types of signal words:

- Continuing the thought
- Illustrating the thought
- Reversing the thought
- Concluding the thought

Continuing-the-Thought Words:

These words indicate that the thought presented in a paragraph is going to be carried forward in the same direction. They suggest that something is to be added onto the same subject, or they are words that join ideas that are similar.

Words that continue the thought:

also	moreover	likewise	as well
first of all	last of all	first	too
in addition	finally	and	
another	furthermore	next	

Example: The company provides voice ***and*** data lines not only to homes but ***also*** to businesses ***as well*** as mobile users.

Illustrating-the-Thought Words:

These words indicate that what follows is simply an illustration or an example that is presented to clarify an idea.

Words that illustrate the thought:

for example	to illustrate	specifically	which shows
for instance	such as	once	

Example: We will have achieved our vision to have one fiber-optic cable running services to the home, a single cable that carries the phones, cable television, computer data, and network services ***such as*** email, pay-per-view movies, and home shopping.

Reversing-the-Thought Words:

These words indicate that the writer is going to change direction in the development of the ideas or is going to reverse or contradict a previous statement. When you come upon such words, prepare yourself for an abrupt change. Slow down and read carefully until you notice that change.

Words that reverse the thought:

but	however	in contrast	nevertheless
instead	conversely	on the contrary	yet
still	even though	otherwise	on the other hand

Example: One large factory may house 6–10,000 line units, ***but*** as the density of population from the center decreases, the central offices would only contain one or two units.

Concluding-the-Thought Words:

These words usually mark the beginning of an extremely important idea. Usually a summary or conclusion will follow. The idea that follows this type of signal word is often the main idea.

Words that conclude the thought:

thus	therefore	hence
consequently	as a result	in conclusion
last of all	finally	in summary

Example: ***Finally***, the All Number Calling (ANC) plan was converted to an all-number code, eliminating alphabet letters from the system altogether.

Critical Thinking Skills

It is often necessary to think critically about something you have just read in order to determine what you can learn from it. This is also called "reading between the lines." Drawing conclusions, making inferences, and making judgments all involve critical thinking. The difference between them is the amount of proof you have for your new information. Before we discuss these three critical thinking skills, we will briefly review the distinction between fact and opinion.

Fact and Opinion

In order to draw conclusions and make inferences, you must be able to use the facts found in what you read. A fact is something that is known to be true via evidence and proof. A fact often answers questions such as: *who, what, where, when, why, how, how much.*

On the other hand, an opinion is how you feel about something. Opinions express what you think or what you believe. Remember that some statements look like facts, but they are really opinions. The following words are clues that an opinion is being given: *seem, think, believe, feel, imagine, guess, probably, may, might, generally,* and *possibly.*

CONTINUE TO THE NEXT PAGE TO SEE EXAMPLES AND BEGIN PRACTICE EXERCISES.

EXAMPLES AND PRACTICE:

Example Items 1–4 and Practice Items 1–23 are designed to help you master critical thinking skills.

Example 1: We have 125 customer-service representatives providing 24-hour order coverage. With sales at peak levels, our sluggish response-time is unacceptable. Customers wait an average of 45 seconds before speaking with someone.

Which of these are facts? Mark the four best choices from this list:

A. Sluggish response-time
B. Sales at peak levels
C. 125 representatives
D. Customers wait an average of 45 seconds
E. 24-hour order coverage
F. Response-time unacceptable

The facts are: B. Sales at peak levels
C. 125 representatives
D. Customers wait an average of 45 seconds
E. 24-hour order coverage

Here is the paragraph again with the facts highlighted:

> We have **125 customer-service representatives** providing **24-hour order coverage**. With **sales at peak levels**, our sluggish response-time is unacceptable. Customers **wait an average of 45 seconds** before speaking with someone.

Opinions based on facts, knowledge, or experience may be valuable, but you must avoid accepting every opinion as valid or true.

Drawing Conclusions

Drawing a conclusion involves interpreting facts in order to make a decision. When you draw a conclusion, it is the only decision possible from the facts the writer gives you. Remember, conclusions must be based on the facts you read. There should be no doubt or guessing about the conclusion the writer expects you to reach.

Example 2: Read this paragraph carefully:
Certain parts are out of stock. Greta called the warehouse on Wednesday to try to get a new shipment in before the end of the week. She was told that deliveries are made only on Mondays.

What is the only conclusion you can draw from the paragraph above?

A. The parts won't be in until next week.
B. The parts will arrive on this Friday.
C. The deliveries are made on Wednesdays.

The answer is A: "The parts won't be in until next week." Of the three possible answers, it is the only conclusion that can be drawn from the facts as they are stated. If deliveries are made only on Mondays, then Greta will not get the parts by this Friday given that it is already Wednesday. The author leads you to draw the conclusion that the shipment won't arrive until next week.

To draw an accurate conclusion, you must carefully think about the main idea and the supporting details. If these details are wrong, you will be unable to draw a correct conclusion.

Making Inferences

When you make an inference, you have some evidence, but not enough to be beyond a reasonable doubt. There are often several inferences that can be made based on a given set of facts. An inference is simply an interpretation. By thinking about what the author has said, you can make an inference about what the author has not said. Be careful that you make correct inferences. Inferences can only be made if there are facts to back them up. There must be a good reason, based on what the author tells you, for an inference you have made.

Even if you are not aware of it, you make inferences all the time. Read this paragraph to see how:

> The door to your supervisor's office is closed. You can see through the window that she is talking with several people from the home office.

You might infer that there's an important meeting going on. In this situation and many others like it, we make decisions based on what we think is true. Without this ability to make inferences, people cannot interpret situations or see beyond simple basics.

Example 3: The hospital had changed hands three times in two years. When consultants interviewed the small staff that had survived the changes, most seemed downtrodden and suspicious.

Here are three statements. Choose the statement that is the best inference:

A. The staff is probably concerned about job stability. The turmoil of the past two years may have taken its toll on employee morale.
B. The remaining staff approves of the changes that have taken place at the hospital.
C. These employees enjoy talking to consultants.

The correct inference is the first statement, A. The staff is probably concerned about job stability. The turmoil of the past two years may have taken its toll on employee morale. Do you see how the author leads you to make this inference? Three owners in only two years and a reduced staff, that's a lot of stress. The words "downtrodden" and "suspicious" further emphasize that the employees are worried.

Some hints for making accurate inferences:

- Determine the author's point of view and reasons for writing.
- Consider all of the information presented.
- Choose the correct dictionary meaning for the words.
- Read and think beyond the printed words.
- Read between the lines.

Making Judgments

If you have no solid proof, but you have some general experience that leads you to an interpretation, then you are making a judgment. A judgment is a sound decision based on facts, but it is not the only decision that can be made based on those facts. Personal opinions enter into most judgments.

For example, when you leave for work, you check the sky and make a judgment as to whether or not to wear a raincoat. You have no way of knowing for sure if it is going to rain or not, so you base your decision on your experiences with similar weather conditions.

Watch for cases in which an author presents what is really only his or her judgment as if it were a conclusion, that is to say, the only possible decision. Think about it and determine if the decision is truly the only one possible.

Cause and Effect

One final critical thinking skill is that of determining cause and effect. Did you ever hear the expression "for every action there is a reaction"? In reading, this action and reaction are called *cause* and *effect*.

Example 4: Read this sentence:

> "Production was halted due to a power outage."

Which of the following statements is correct?

A. The cause is production; the effect is a power outage.
B. The cause is a production outage; the effect is power.
C. The cause is a power outage; the effect is a halt in production.

The answer is C: "The cause is a power outage; the effect is a halt in production." In the original sentence, notice that the effect is stated first and its cause follows. When reading, cause and effect may not always be written in order. The clue words in this case are "due to" and the cause follows.

To help determine cause and effect, consider punctuation, clue words, and other ideas. Look at another sentence:

> "It's impossible to concentrate because of the construction going on in a nearby office building."

The phrase "because of" is a clue that what follows (in this case the construction) is the cause of some previously stated effect (in this case, that it's impossible to concentrate).

Remember the discussion of signal words in the section above. Certain words and phrases, such as "the reason for," "because," "caused by," and "why" signal causes. If you see these words in a sentence, they usually indicate that the words that follow will explain a cause, that is to say, they will likely give a reason. Read the following sentence and try to figure out the cause and effect.

> "Because of the strike, deliveries have been canceled."

The word "because" signals that the phrase that follows is a cause. Whenever you see the word because, you should recognize that a cause and its effect will follow.

Effect words can help signal the "what happened" part of the sentence, or the effect. Some effect signal words are: "the product," "the result," "the outcome," "so that," and "the consequence."

Remember:

- Identify the facts, think about the facts and assess their truth, make your decision based on reliable facts.
- Be alert for judgments, inferences, and conclusions the author has made in addition to making your own. Remember to think and decide for yourself.

CONTINUE TO THE NEXT PAGE TO BEGIN PRACTICE EXERCISES.

PRACTICE ITEMS

For each item, read the statement or paragraph and select the best answer from the list of choices.

1. The Compujet 945 was the fastest printer on the market. The maker claimed that a faster printer was impossible without a reduction in print quality. In December, a small firm introduced a laser printer of comparable quality. This new machine was twice as fast as the Compujet 945.
   What is the best *conclusion*?
   A. The new printer was inferior in quality.
   B. A faster printer was possible.
   C. The Compujet 945 is still the best value for the money.

2. Understanding body language can be useful in business communication. If we don't like someone, we may cross our arms while talking to them. When we want to tell someone "I'm in charge," we might try to stand over them as we talk. If direct eye contact is made when talking, we imply that we speak the truth.
   What is the best *conclusion*?
   A. We always cross our arms when we talk to associates.
   B. We tell our co-workers how we feel with body language.
   C. We are in charge if we make direct eye contact.

3. Martina got a hefty raise. She then bought a brand-new car and TV on credit. She also moved to a big house in a fancy neighborhood. Now Martina is having trouble paying her monthly bills.
   What is the best *conclusion*?
   A. Martina works a lot of overtime.
   B. Martina is spending beyond her means.

4. Originally we had confidence in Pete winning the election. But as he repeatedly made mistakes, we grew dubious. It wasn't surprising when his opponent did so well in the poll right before election day.
   What is the best *conclusion*?
   A. Pete won the election.
   B. Pete lost the election.

5. The project is scheduled to begin next month, as soon as the funds have been approved. Unfortunately, the CEO isn't enthusiastic about the project and hasn't appropriated funding yet.
   What is the best *conclusion*?
   A. The project will be delayed.
   B. The project will begin on time.

6. The slowing economy has resulted in an inventory backlog. With projections for the next six months indicating an even slower economy, it is doubtful if the plant will be going at full capacity.
   What is the best *conclusion*?
   A. Everyone's job appears to be safe.
   B. More workers are needed to fill positions.
   C. There could easily be a layoff in the next few months.

7. Perfect Pizza has more business than it can handle. Its biggest problem is employee turnover. The pizzeria hires a lot of college students but must hire a new staff every semester. Perfect Pizza has just placed an advertisement in Sunday's classifieds for 11 new positions.
   Which conclusion is *false*?
   A. Perfect Pizza's business is doing well.
   B. Perfect Pizza is probably located near a college.
   C. College students make lousy pizza.
   D. Perfect Pizza is now hiring.

8. The staff feels strongly about the community, so they all participated in the ten-mile run to benefit the shelter.
The *effect* is:
   A. The staff feels strongly about the community.
   B. They all participated in the run.
   C. The staff feels strongly about the shelter.

9. Dana was given an award and a bonus after she caught the computer hacker who had broken into the company's records.
A cause may have multiple effects. The *effect(s)* are:
   A. Dana got an award; Dana got a bonus.
   B. Dana caught the computer hacker; she got a bonus.
   C. The hacker broke into the company's records.

10. Antonio's wit and charisma caused him to be extremely popular with his fellow employees.
A single effect may have many causes. The *cause(s)* are:
   A. Antonio's fellow employees
   B. Antonio's wit; Antonio's charisma
   C. Antonio's popularity; Antonio's fellow employees

11. These new biodegradable containers have been a success because our customers are concerned about the environment.
The *cause* is:
   A. Biodegradable containers are new.
   B. Customers are concerned about the environment.
   C. Biodegradable containers are successful.

12. Leo's perseverance finally resulted in the discovery of a way to detect cancer at an earlier stage.
The *cause* is:
   A. Discovery of a way to detect the cancer
   B. Detection at an earlier stage
   C. Leo's perseverance

13. I've got an urgent report to finish, so I won't be able to meet you for dinner and a movie tonight.
The *effect* is:
   A. I've got an urgent report to finish.
   B. I'll finish the report before dinner.
   C. I can't meet you for dinner and a movie.

14. The south entrance will be closed for two weeks so that the renovation work can be completed.
The *effect* is:
   A. The entrance will be open for two weeks.
   B. The entrance will be closed for two weeks.
   C. The renovation work can be completed.

15. Too much of the taxpayers' money is spent on welfare payments.
Does the above statement sound like a *fact* or an *opinion*?
   A. Fact
   B. Opinion

16. The weather is perfect today.
Does the above statement sound like a *fact* or an *opinion*?
   A. Fact
   B. Opinion

17. Halley's Comet has appeared at 76-year intervals since at least 240 BCE.
Does the above statement sound like a *fact* or an *opinion*?
   A. Fact
   B. Opinion

18. All CIA agents are involved in subversive activities.
Does the above statement sound like a *fact* or an *opinion*?
   A. Fact
   B. Opinion

19. Many women hold administrative positions in public schools.
Does the above statement sound like a *fact* or an *opinion*?
   A. Fact
   B. Opinion

20. Major U.S. airlines are changing advance-purchase requirements for their cheapest non-sale fares. For these special fares, 21 days advance purchase will be required instead of the 14 days advance that used to be required.
What is the best *inference*?
   A. Everyone is going to pay more money to fly.
   B. Vacationers will be affected the most.
   C. It will cost more money to fly overseas.

21 After many days of freezing rain, the rivers of northwestern Europe surged over their banks to engulf towns and cities in Germany, France, Belgium, and, worst hit of all, the Netherlands.
What is the best *inference*?
   A. It has not been raining in Italy.
   B. The Netherlands will require many costly repairs to mitigate the damage.
   C. Most of northwestern Europe is under water.

22. After days of freezing rain, the rivers of northwestern Europe surged over their banks to engulf towns and cities in Germany, France, Belgium, and, worst hit of all, the Netherlands.
What is the best *inference*?
   A. Europe is not a place to visit now.
   B. Paris and Berlin have been flooded.
   C. The weather of northwestern Europe has been cold.

23. Every ten years, the United States conducts a new census. The objective is to determine the actual population in the country. The job of actually counting people is done by enumerators.
What is the best *inference*?
   A. Enumerators do only field work.
   B. All population counting is done by computer.
   C. Part of an enumerator's job is field work.

BEFORE MOVING ON TO ADDITIONAL PRACTICE PROBLEMS, GO TO THE NEXT PAGE TO CHECK YOUR ANSWERS FOR THE GROUP OF QUESTIONS YOU HAVE JUST COMPLETED.

Answer Key

1. B. The conclusion that can be drawn is that a faster printer was possible. This conclusion comes directly from the information given, although the words were not stated.
2. B. The best conclusion we can draw from this paragraph is that we tell our co-workers how we feel with body language.
3. B. The best conclusion we can make here is that Martina is spending beyond her means. The paragraph does not mention her overtime, so we cannot draw any conclusion about that.
4. B. If Pete did poorly in the final poll, you can conclude that he lost the election.
5. A. Since the CEO hasn't appropriated the funds, it is likely that the project will be delayed.
6. C. If there is a backlog of inventory and the plant will not be running at full capacity, it is likely that some workers could be laid off.
7. C. Based on the facts presented, it is a false conclusion that college students make lousy pizza.
8. B. The effect signal word "so" tells us that the effect is "they all participated."
9. A. The cause is that Dana caught the computer hacker. This cause had two effects: it resulted in Dana receiving an award and a bonus.
10. B. In this example, a single effect (Antonio's popularity) has two causes: his wit and charisma.
11. B. The clue here was the cause signal "because." The cause is "customers are concerned about the environment." The effect is that "biodegradable containers have been a success."
12. C. Leo's perseverance (the cause) resulted in (a signal that the effect follows) the discovery.
13. C. The cause is the urgent report that must be finished. The effect, preceded by the signal "so," means meeting for dinner and a movie.
14. B. The renovation work is causing the entrance to be closed for two weeks (the effect).
15. B. There is no way to prove this. What is too much? Many people have many different views.
16. B. What may be perfect weather for one may not be perfect for another.
17. A. This can be proven.
18. B. This cannot be proven.
19. A. This can be proven.
20. B. From the statement, you can infer that vacation travelers will be most affected as they plan travel ahead. Business travelers usually don't plan even 14 days ahead.
21. B. From the statement you can infer that the Netherlands will require many costly repairs to mitigate the damage.
22. C. As the statement indicates that the rain is freezing, you can infer that the weather has been cold.
23. C. You can infer that to do the actual counting, the enumerators must go out in the field.

CONTINUE TO THE NEXT PAGE FOR MORE PRACTICE EXERCISES.

Let's move on to reading passages followed by comprehension questions. As you read, consider the topics discussed earlier in this module, for example, signal words and critical thinking skills. For each problem, circle the letter of the correct answer. Answers for each passage follow the questions for each passage.

Use the passage below to answer questions 24–29.

Scientists believe that much of the mass in the universe is comprised of a mysterious material they call dark matter. Astronomers theorize that dark matter is made up of many different things. Some theories predict that it may consist of dust, planets, intergalactic gas, burned-out stars, black holes, and brown dwarfs. Other theories propose that it is made up of elementary particles. Astronomers believed that elementary particles played a key role in the formation of the universe.

Despite the fact that dark matter makes up more than 90% of the mass in the universe, its discovery is a fairly recent event. The fact that such a massive body in the celestial heavens has escaped scientific detection is not surprising—it neither emits nor reflects electromagnetic radiation. Unfortunately, for astronomers, their instruments can only measure and detect electromagnetic radiation.

Light and radio signals are two examples of electromagnetic radiation. The human eye is really an electromagnetic radiation detector—a light detector. The human visual system operates on the principle of recognizing light waves and light-wave patterns that reach the eye.

How was dark matter discovered if no scientific instrument is capable of directly detecting and measuring it? Dark matter can only be detected indirectly.

To understand this process, a brief background on the science of light and gravity is required. The light that we see around us is really packets of energy particles that travel along a straight path. These energy particles contain both mass and energy. Gravity is an "attractive" force; it pulls things. The greater the mass of an object, the greater is its gravity-attractive pulling force.

Dark matter is so massive that its gravitational pull bends the light rays—energy particles—coming from distant stars. Therefore, although astronomers have no instruments to directly see dark matter, they are able to directly record and measure the bending of this electromagnetic energy—light waves. By calculating the gravitational force needed to bend light, scientists can calculate the mass of the object bending the light rays—in this case, dark matter. By doing this, scientists are able to conclude with confidence that something with enormous mass exists even though they have no direct evidence of its existence.

24. According to the passage, dark matter can only be detected indirectly. Why?
    A. Astronomers are unable to track and measure bent light rays.
    B. Astronomers are unable to detect electromagnetic radiation.
    C. Dark matter neither emits nor reflects electromagnetic radiation.
    D. No existing instruments are capable of measuring these weak signals.

25. What can be concluded from the passage?
    A. Non-dark matter makes up 10% of the universe.
    B. Astronomers must discover a method of measuring electromagnetic radiation.
    C. Dark matter can be detected directly.
    D. As electromagnetic radiation detectors, the eyes may be trained to spot dark matter.

26. Which of the following facts about light is NOT correct?
    A. Light can travel in a straight line.
    B. Light only travels in a straight line.
    C. Light is an example of electromagnetic radiation
    D. Light rays can be bent.

27. Electromagnetic radiation is *not*:
    A. Gravity
    B. Light
    C. Radio signals
    D. All of the above are forms of electromagnetic radiation.

28. Which of the following played a role in the formation of the universe?
    A. Intergalactic gas
    B. Elementary particles
    C. Dense particles
    D. Brown dwarfs

29. Astronomers believe that dark matter is made up of all the following, except:
    A. Black holes
    B. Dust
    C. Astromatoids
    D. Intergalactic gas

Answer Key

24. C. The second paragraph explains that dark matter does not emit or reflect electromagnetic radiation. Because electromagnetic radiation is the only thing that astronomers' instruments can detect, there is no way for scientists to directly detect dark matter. Therefore, they must use indirect methods to detect dark matter.

25. A. If 90% of the universe is dark matter, the remaining 10% must be non-dark matter. The other three options can be ruled out based upon contradictory facts presented in the reading.

26. B. The last paragraph states that dark matter can bend light rays. Therefore, B cannot be true.

27. A. Paragraph 3 tells us that light and radio signals are forms of electromagnetic radiation. Gravity is explained as a force-to-mass relationship in paragraph 5.

28. B. In the last sentence of the first paragraph, the passage clearly states that elementary particles played a role in the formation of the universe.

29. C. Astromatoids are never mentioned in the passage, whereas the other options are listed as ingredients theorized to make up dark matter.

Use the passage below to answer questions 30–35.

Dinosaurs are enormous creatures that lived millions of years ago. The biggest dinosaur is the largest animal to ever live on land. Compared to present-day land animals, many dinosaurs weighed more than 10 full-grown elephants.

The time period between 240 million to 63 million years ago is known as the Mesozoic Era. The Mesozoic Era is sub-divided into three periods: Triassic, Jurassic, and Cretaceous. The Triassic Period lasted between 240 million to 205 million years ago. The Jurassic Period lasted between 205 million to 138 million years ago. The Cretaceous Period lasted between 138 million to 63 million years ago.

Dinosaurs first appeared on Earth approximately 220 million years ago in the Triassic Period. They dominated the late Triassic, the entire Jurassic, and much of the Cretaceous Period. Then rather suddenly, the dinosaurs died out at the end of the Cretaceous Period.

The sudden extinction of the dinosaurs 63 million years ago remains a mystery to this day. Scientists have developed many theories to explain this.

One theory posits a change in the dinosaurs' food supply. Some experts believe that during the Cretaceous Period, plant evolution exploded and entirely new forms of vegetation dominated the landscape. Plant-eating dinosaurs were unable to eat this new plant form and they starved to death. This resulted in a collapse of the food chain making it so that carnivorous dinosaurs that fed on the vegetarian dinosaurs also starved to death.

Another theory involves a large asteroid hitting Earth at the end of the Cretaceous Period. According to this theory, the crashing of the asteroid threw billions of tons of material into the atmosphere. The heat from the impact is believed to have also ignited a massive global fire and a blanket of smoke and debris blocked out sunlight for months. By depriving plants of sunlight, this effectively killed off most of the vegetation. Plant seeds and roots, however, survived this catastrophe. The plant-eating dinosaurs died off from starvation and the rest of the dinosaur food chain collapsed as a result. The darkness also caused the land temperatures to drop below freezing for 6–12 months. This change in climate may have damaged the surviving dinosaurs' ability to procreate, therefore ultimately resulting in their extinction.

The most widely accepted theory among scientists involves a change in Earth's climate. The climate cooled towards the end of the Cretaceous Period and the winters may have been too cold for the dinosaurs. It is proposed that the cold temperature disrupted the dinosaurs' reproductive patterns. Modern reptiles—alligators, turtles, and crocodiles—are believed to have close evolutionary ties to dinosaurs. Studies show that the temperature of the nests of these modern-day reptiles determines the sex of their offspring. A warmer or cooler nest produces either all male or female offspring. From these observations, it is possible to imagine how the dinosaurs' population suffered when the land temperature dropped: the cool temperature favored offspring of one sex. With no mates of the opposite sex, dinosaurs were unable to procreate and ultimately, all species of dinosaurs died off.

30. According to the climate theory, the land temperature was below freezing for 6–12 months. Applying knowledge from the passage, how did a drop in temperature kill off the dinosaurs?
    A. The plants froze and the plant-eaters followed soon after,
    B. Because it was cold, dinosaurs went to warm fires and ultimately died from burns.
    C. Temperature dictates the sex of reptile offspring and entire species of dinosaurs of the same sex were born making future procreation impossible.
    D. Dinosaurs are unable to maintain a constant body temperature; they died from the cold.

31. Which of the following is one of the theories that scientists proposed as an explanation for the sudden disappearance of the dinosaurs?
    A. The dinosaurs' food supply changed between 205 million and 138 million years ago.
    B. The dinosaurs' food supply changed between 138 million and 63 million years ago.
    C. The dinosaurs' food supply changed in the middle of the Triassic Period.
    D. The dinosaurs' food supply changed in the late Jurassic Period.

32. What CANNOT be concluded from the passage?
    A. Dinosaurs died off 63 million years ago.
    B. The cooling of land temperature caused all dinosaurs to be male.
    C. To this day, no land animal has ever been bigger than the largest dinosaur.
    D. Dinosaurs first appeared in the Triassic Period.

33. The word "procreate," as used in the passage, may be defined as the ability to:
    A. Survive the cold temperature
    B. Produce a new generation of viable and living offspring
    C. Lay eggs
    D. Adapt to the new forms of plant life

34. In the large-asteroid theory, it's understandable how plant-eating dinosaurs died off, but meat-eaters died off as well. In this theory, what is the likely reason for the meat-eaters dying off?
    A. The climate changed and it became too cold for all dinosaurs to survive.
    B. The disappearance of an edible vegetation food supply directly eliminated the meat-eaters' necessary supply of fiber and nutrients.
    C. All dinosaurs died from the explosive force of the asteroid crash.
    D. The disappearance of edible vegetation starved the plant-eating dinosaurs. In turn, the meat-eating dinosaurs starved because they could no longer prey upon the plant eaters.

35. What is the best title for this passage?
    A. Three Theories on the Extinction of Dinosaurs
    B. Dinosaurs, Their Time on Earth and Theories on Their Extinction
    C. Mesozoic, The Age of Dinosaurs
    D. Cretaceous Period, a Time When the Dinosaurs Died Off

Answer Key

30. C. The passage argues that the sex of dinosaur eggs is affected by temperature, just as it is for modern reptiles. As the temperature shifted to a colder extreme than dinosaurs were used to, an increasing number of dinosaurs of only one sex were born and they could no longer procreate.

31. B. Paragraph 2 gives the time of the Cretaceous period and paragraph 5 states that plant life changed drastically during this time. The plant-eating dinosaurs could not eat the new plants and died. Note that the other answers are partially correct, but the time periods are wrong.

32. B. There is no mention of which sex was favored by colder temperatures.

33. B. The last paragraph implies that dinosaurs of both sex are necessary to produce a new generation. Because this theory of extinction posits that the temperatures resulted in only one sex, the dinosaurs could not reproduce. As used, "procreate" refers to this process.

34. D. This item refers to the food chain described in paragraph 5. When the edible vegetation disappeared, the plant-eating dinosaurs died. Because the plant-eating dinosaurs were the food source for the meat-eaters, their disappearance left the meat-eaters without food as well.

35. B. This title is the most general and describes the content of the entire passage. The other options only deal with specific portions of the content.

Use the passage below to answer questions 36-41.

Memorandum

To: All Employees
From: Travel Administrator
Subject:

In a joint effort with the City Coordinator, the company has reached an agreement with the local transit authority to offer discount tickets to current employees. The goal of this program is to encourage employees to take public transit rather than drive their cars to work. This program is the first of its kind in this city, and we are piloting this idea in continuing with our company's commitment to being a leader in innovation.

The discount on the tickets ranges from 12% to a maximum of 30%. Riders who purchase higher-value tickets may expect to enjoy a greater discount: tickets valued for five round-trip rides will have a 12% discount over the regular fare; tickets valued for 10 round-trip rides will have a 20% discount over the regular fare; tickets valued for 20 round-trip rides will enjoy a discount of 30%.

Three discount-ticket vending machines will be available in the 3rd floor cafeteria by the end of this week. The machines will accept cash, credit cards, and debit cards. Tickets may also be ordered over the phone. We want to make ticket purchase as simple as possible for our employees; please forward any ideas to Pat Boden at Human Relations.

To prevent abuse of this program, every employee must enter his or her personal code. This code is printed on the lower back portion of the company ID card. Employees may purchase a limit of 45 round-trip rides within the span of eight weeks. The machines will not dispense tickets within an eight-week period if the employee has already purchased 45 round-trip rides.

The success of this program will depend on everyone's joint effort. Pat Boden in Human Relations will accept any and all suggestions anyone may have. Please enjoy the discount tickets.

36. From the passage, it is safe to conclude that:
    A. The company wants to maintain current public ridership levels.
    B. The company will make a profit from the sales of the discount tickets.
    C. The company is concerned with the environment and wants to reduce pollution.
    D. The company wants its employees to use public transportation.

37. What is an appropriate "Subject:" statement for this memo?
    A. Directions for Buying Public Transit Tickets
    B. City Coordinator and Company Reach Agreement!!!
    C. Discount Public Transit Ticket Program
    D. New Travel Policy

38. Any questions or suggestions may be forwarded to:
    A. City Coordinator
    B. Transit Authority
    C. Pat in Human Relations
    D. Travel Administrator

39. What is a reasonable and helpful suggestion someone can make?
    A. Allow riders to buy their tickets with debit cards.
    B. Allow riders to buy their tickets over the phone.
    C. Allow riders to buy their tickets online over the Internet.
    D. Allow riders to buy their tickets without requiring their personal code.

40. Which is NOT true:
    A. Tickets valued for 5 round trips will be discounted 12%
    B. Tickets valued for 10 round trips will be discounted 20%
    C. Tickets valued for 15 round trips will be discounted 25%
    D. Tickets valued for 20 round trips will be discounted 30%

41. This memo was sent out by:
    A. City Coordinator
    B. Transit Authority
    C. Pat in Human Relations
    D. Travel Administrator

Answer Key

36. D. This is explicitly stated in the first paragraph. The other options may or may not be true, but they do not appear anywhere in the passage.

37. C. This option is the most appropriate because it takes into account the entire program. Answers A and B cover only a portion of the memo, and D is not accurate.

38. C. This is explicitly stated in paragraphs 3 and 5.

39. C. Options A and B are already implemented and option D is not valid because the employee code is necessary to prevent abuse (see paragraph 4).

40. C. This is the only option not listed in paragraph 2.

41. D. This is explicitly stated in the line labeled "From" at the top of the memorandum.

Use the passage below to answer questions 42-47.

The existence of soap dates back to the Germanic tribes of the first century A.D. This early form of soap was made from animal fat and wood ash. Essentially all forms of soap are comprised of two basic elements: fatty acids and some form of metallic salt.

In colonial America, soap was made from waste fats and lye. The colonists would run water through wood ashes and use the lye (the water that percolates out from this process). Once the lye is leached from the ashes, it is then boiled with the fats. This process is called saponification. The product that results is a jelly-like substance that can be functionally classified as soap.

Despite the many varieties of soaps, saponification remains the basis of soap manufacturing today. Modern-day soap making is still a matter of boiling fatty acids and some form of metallic salt; fat and oil are heated with either sodium hydroxide or potassium hydroxide.

By varying the composition or method of processing, soap-manufacturers can change the lathering, cleansing, and water-softening properties. During saponification, perfumes, dyes, germicides, or gritty particles may be mixed in to achieve a product of varying purpose. For example, sodium or potassium may be replaced by other metals (e.g. aluminum, calcium, or magnesium) in making soaps for industrial uses. These soaps are used to serve such industrial needs as paint driers, ointments, lubricating greases, and waterproofing.

Chemically, the essential reaction that occurs in saponification is the bonding of metallic salts to fatty acids. An understanding of these two components—fatty acids and metallic salts—will explain how soap functions. Fatty acids are hydrophobic (hydro = water, phobic = fear). For this reason, oil and water do not mix; they tend to separate from each other. Hydrophobic compounds dissolve easily in oily substances. Metallic salts are hydrophilic (hydro = water, philic = like). For this reason, metallic salts dissolve easily in water. Soap is a compound that contains both hydrophobic and hydrophilic components. The fact that soap molecules can attach themselves to both oil and water explains their ability to emulsify grease.

42. From the passage, it can be inferred that wood ashes contain:
    A. Lubricants
    B. Metallic salts
    C. Black carbon
    D. Fatty acids

43. What is the best title for this passage?
    A. Soap-Making in Colonial America
    B. Fatty Acids and Metallic Salts
    C. Saponification and a Word About Soap
    D. Innovative Soap-Making Techniques

44. In terms of ingredients involved in saponification, which does not belong with the other items?
    A. Potassium
    B. Sodium
    C. Aluminum
    D. Hydronium

45. Soap can emulsify grease because:
    A. It has both hydrophobic and hydrophilic parts.
    B. Its metallic salts attach themselves to oil and grease.
    C. Its metallic salts are hydrophilic.
    D. Its metallic salts are hydrophobic.

46. Hydrophilic compounds:
    A. Dissolve easily in oil
    B. Dissolve easily in water
    C. Dissolve easily in oil and water
    D. Cannot dissolve in oil or water

47. Soaps may not be used:
    A. As paint driers
    B. As ointments
    C. In waterproofing
    D. All of the above are uses and applications for soap.

Answer Key

42. B. The first paragraph states that fatty acids and metallic salt are required to make soap. In paragraph 2, it is explained that in Colonial America, soap was made from waste fats and wood ashes. Waste fats imply the presence of fatty acids. Therefore, the second component, metallic salt, must be lye, which is obtained from wood ashes.

43. C. Options A and B are too narrow in that the passage covers more than just those aspects of soap-making, and D is incorrect because there is nothing about new or innovative techniques.

44. D. Hydronium is a made-up item and it is not listed in the passage. The others are all named.

45. A. Hydrophobic components attach to grease; hydrophilic components attach to water. According to paragraph 5, because soap has both hydrophobic and hydrophilic components, it is able to emulsify grease.

46. B. Paragraph 5 states hydrophilic compounds such as metallic salts dissolve easily in water.

47. D. All three uses are listed at the end of paragraph 4.

Use the passage below to answer questions 48–53.

Water is the most abundant liquid on Earth. In two of its forms, liquid and solid (ice), it covers approximately 70% of Earth's surface. It is odorless, tasteless, transparent, and colorless in small amounts but is slightly bluish in large quantities. Water possesses some extraordinary properties; it has a tendency to remain in its liquid form. The temperature needed to transform liquid water into gaseous steam is unusually high. On the other extreme, the temperature needed to transform liquid water into solid ice is unusually low, with respect to its boiling point. What this means is that great temperature changes are required to affect water molecules at the atomic level. Scientists would say that water has a high heat capacity.

Chemically, water is a relatively simple compound of two hydrogen atoms bonded to one oxygen atom (H_20). The two hydrogen atoms are located on either side of the oxygen atom (H-O-H). Because of the strong electronegative nature of the oxygen atom, the H_20 molecule tends to be in the shape of a "V" with a net-negative charge on the oxygen atom and net-positive charge on the hydrogen atoms. A molecule that exhibits such behavior is called a "polar molecule."

The very chemical nature of water may be explained by examining how two water molecules (H_20) interact. The slightly negative oxygen atom of one water molecule has a tendency to attract the slightly positive hydrogen atom of another water molecule. This form of attraction is known as a hydrogen-bond. This use of the word "bond" in this instance is really a misnomer because it is not an atomic bond; the two atoms merely have a slight attraction to each other. Hydrogen-bonds are key to understanding why water has such a high heat capacity.

Because of the simplicity and size of the water molecule (three atoms), billions upon countless billions of hydrogen-bonds are present in a single drop of water. It is this extraordinarily stable and complex network of hydrogen-bonds that gives water its uniquely high heat capacity. In order for a single drop of water to evaporate, all the countless billions of hydrogen-bonds must be broken. On the other extreme, for a single drop of water to freeze, all the countless billions of hydrogen bonds must line up and compact themselves into an ordered crystal lattice. Regardless of the event, changing liquid water into other forms requires affecting an incredibly large number of hydrogen bonds; it is this property of water that gives water its uniquely high heat capacity.

48. H_2O has a "V" shape with a net-positive charge on the two hydrogen atoms and a net-negative charge on the oxygen atom because:
    A. Of the electronegative oxygen atom.
    B. Of the electronegative hydrogen atom.
    C. Two hydrogen atoms "out-power" the single oxygen atom.
    D. Water has a high specific heat.

49. The word "misnomer" may be defined as:
    A. Incorrect use of name or designation.
    B. Atoms exhibiting a bonding event.
    C. Atoms exhibiting a slight attraction for each other.
    D. Atoms bonding incorrectly to each other.

50. The high heat capacity in water is due to:
    A. Hydrogen bonds
    B. The large number of hydrogen bonds
    C. The electronegative nature of the oxygen bond
    D. Water being a polar molecule

51. Which is NOT true when water evaporates:
    A. All hydrogen bonds must be broken.
    B. All hydrogen bonds must line up into a crystal lattice
    C. The temperature required is high.
    D. All of the above are true.

52. What is NOT mentioned in the passage?
    A. Oxygen is electronegative.
    B. Water is a polar molecule.
    C. Water boils at 100° C.
    D. Water may be bluish.

53. You find a liquid substance in a jar that has the following qualities: odorless and tasteless; transparent and colorless; and a high heat capacity. If these observations are TRUE and FACTUAL, you can safely conclude:
    A. That this substance is a compound of two hydrogen atoms bonded to one oxygen atom.
    B. That this substance is a polar molecule.
    C. That evaporation of this substance requires a large temperature change.
    D. There is not enough information to draw a conclusion.

Answer Key

48. A. The answer is clearly stated in paragraph 3. Options B and C are made up; option D is true but does not answer the question.

49. A. As used in paragraph 3, the word misnomer indicates that the word bond is not really the best word because it does not describe an atomic bond. Thus we can deduce that a misnomer is an incorrect use of name or designation.

50. B. The last paragraph explains why this is so, and the last sentence explicitly states that it is the "incredibly large number of hydrogen bonds" that give water its uniquely high heat capacity.

51. B. This is only true when water freezes, as stated in paragraph 4.

52. C. Although this is true, it is not mentioned in the passage.

53. C. Because the substance has a high heat capacity, you can conclude that evaporation of the substance would require a large temperature change. There is not enough information in the question to determine whether the other options are true.

Use the passage below to answer questions 54-59.

There are about 3,300 species of mushrooms throughout the world. They are often identified by their umbrella-shaped tops. Although they share certain qualities with green plants, mushrooms are classified in an entirely different class.

A major distinction between green plants and mushrooms is that green plants have chlorophyll and mushrooms do not. Green plants use chlorophyll in a process called photosynthesis. In photosynthesis, green plants make food from water and surrounding nutrients in the soil in a sunlight-fuelled process. A lack of sunlight will ultimately kill a green plant. Mushrooms lack chlorophyll and do not require sunlight or photosynthesis to survive. Mushrooms survive mainly by absorbing food material from living or decaying plants in their surroundings.

There are two major parts of a mushroom: 1) the mycelium and 2) the fruiting body. The mycelium grows just below the surface of the soil and absorbs nutrients from its surroundings. The fruiting body grows from the mycelium and has the familiar umbrella shape that we often associate with mushrooms. Unlike the mycelium, which is able to live and grow for many years, the fruiting body lives for only a few days. A major purpose the fruiting body serves is that it houses the seeds for future generations of mushroom. These seeds are called spores.

All mushrooms need carbohydrates, proteins, certain vitamins, and other nutrients. Because mushrooms are unable to photosynthesize their food, they attain their food by breaking down organic material. The mycelium releases enzymes onto the organic material that they are attached to. These enzymes convert complex compounds into simpler compounds that are absorbed by the mycelium.

Mushrooms have three major survival strategies. They may live as 1) saprophytes, 2) parasites, or 3) mycorrhiza. Mushrooms that live on dead or decaying materials are called saprophytes. Mushrooms that grow on living plants are called parasites. Some forms of parasitic mushrooms cause diseases and may eventually kill the host plants on which they feed. Some mushrooms that grow in or on roots of living green plants do not cause harm. In fact, both the plant and the mushroom benefit from each other's presence. Mycorrhiza is the symbiotic association of the mycelium with the roots of a seed plant. In this relationship, the mushroom's mycelium absorbs water and certain materials from the soil and passes these on to the plant. In return, the plant feeds the mushroom.

54. According to the passage, which statement is NOT true about mushrooms:
    A. There are over 3,300 species of mushrooms throughout the world.
    B. Mushrooms can grow in the dark.
    C. Spores are housed in the mycelium.
    D. Mushrooms can grow on roots of living plants.

55. According to the passage, the major reason mushrooms are not classified as green plants is because:
    A. Mushrooms do not require sunlight for photosynthesis.
    B. Mushrooms do not have leaves.
    C. Mushrooms feed on dead and decaying materials.
    D. Mushrooms do not have chlorophyll.

56. According to the passage, all mushrooms need which of the following to grow and survive:
    A. Darkness
    B. Carbohydrates
    C. Dead and decaying material
    D. Sunlight

57. The word enzyme, as used in the passage, suggests that:
    A. Enzymes shield mushrooms from bacterial infections
    B. Enzymes are parasites in a relationship known as mycorrhiza
    C. Enzymes build complex compounds from simpler compounds
    D. Enzymes break down complex compounds into simpler compounds

58. In a process called photosynthesis, chlorophyll makes food from:
    A. Water
    B. Proteins
    C. Dead and decaying material
    D. Vitamins

59. Which of the following is true:
    A. Mycelium can live and grow for many years and the fruiting body can live and grow for many years.
    B. Mycelium can only live for a few days and the fruiting body can only live for a few days.
    C. Mycelium can live and grow for many years but the fruiting body can only live for a few days.
    D. Mycelium can only live for a few days but the fruiting body can live and grow for many years.

Answer Key

54. C. This option is factually incorrect. Paragraph 3 states that spores are housed in the fruiting body.

55. D. This is stated explicitly in paragraph 2.

56. B. The need for carbohydrates is stated in paragraph 4. Options A and D are incorrect because mushrooms have no lighting requirements (see paragraph 2), and option C is incorrect because mushrooms may also grow on roots of living plants (see paragraph 5).

57. D. This is explained in paragraph 4.

58. A. This is mentioned in paragraph 2.

59. C. This is stated in paragraph 3.

DEVELOPMENTAL SUGGESTIONS

To improve your reading skills:

- Read as much and as many things as you can: books, magazines, newspapers. Those who read the best are those who read the most.
- Ask yourself questions about what you read. Ask yourself what the main idea is, whether you can infer anything from the passage, whether the conclusions are valid, whether there are cause-and-effect relationships.
- Talk with others about what you read. Hear what they have to say. Think about whether you agree or disagree.
- Become more analytical and critical about what you read. Reading is not just about moving your eyes across pages. It is about processing those words and ideas and thinking about them and beyond.
- Visit your local library every few weeks. Take advantage of an opportunity to sit quietly and read. Practice focusing and concentrating and paying attention.
- Enroll in a reading course at a college or at the adult education center in your city or county. This is especially important if your score on the Reading Skills Inventory Levels 1 and 2 was much lower in Level 2 that in Level 1 or if your score was fewer than 8 correct on the Reading Skills Inventory Comprehension Passage. You might also consider enrolling in additional courses just because you would like to become a more effective and efficient reader.
- Enroll in an online reading comprehension course or search the Internet to get additional tips on improving your reading comprehension.
- Pick up any magazine while waiting in a doctor's office or other waiting room. Any publication offers information and the opportunity to become a better reader.
- Study speed-reading online or in a course at your local college or adult education program.
- Take an online course in speed reading or search the Internet for tips on improving your reading rate.
- When you read, push yourself to read a little faster, always making sure not to sacrifice understanding of the material. Measure your reading rate by counting the number of words you read in a minute. Do this several times each time you want to measure your reading rate. Your reading rate will fluctuate depending upon the type and difficulty of the material so obtaining an average of several one-minute readings is a great idea.

YOU ARE NOW READY TO PROCEED TO MODULE 2: MATH COMPUTATION.

MODULE 2: MATH COMPUTATION

The ability to think through problems, determine how to solve them, and to compute with numbers is a requirement of many Associate jobs at Verizon.

The Number Computation subtest on the TSA requires that you understand how to compute with whole numbers, fractions, decimals, and percents. You will need to be able to add, subtract, multiply, and divide whole numbers, fractions, and decimals, as well as solve some fundamental calculations with percents.

As part of your TSA Prep Course materials, you have received a text titled Mastering Math. This text has four parts:

- Whole Numbers
- Fractions
- Decimals
- Percents

It looks to be a large text and you are probably thinking that it will take quite a lot of time to complete. This is not usually the case. The text provides quick and easy-to-understand instructions in each of these areas and many practice problems that will help you increase your speed and accuracy. You will find that in many of the topics you will not need to complete all of the practice problems. You may find that after doing just a few problems you have mastered that skill and are ready to move to the next topic. Of course, you may choose to work every problem for additional practice and reinforcement. There are answer keys for each of the four parts at the conclusion of each part.

If your Math Skills Inventory showed that you were already successful in working with whole numbers, you may want to skip this module completely and just complete the "Checking Up on Whole Numbers" exercise that concludes the module on whole numbers. If you were successful on fractions, decimals, and/or percents, you may be able to skip some or all of these topics. What looks like a large and overwhelming math text is one that you may either not need to complete fully or even at all. You will probably be able to complete the text in a fairly short time. Students who have studied math using Mastering Math have found it very useful and enjoyable.

Although the text Mastering Math includes some word problems, predominantly in the whole numbers and percents parts, you do not need to complete these word problems as there are no word problems on the TSA Math Computation subtest. You may choose to do so for enrichment and because math word problems often relate to real-life situations. Solving math word problems related to the real-life situations you may encounter can be especially valuable in both your work and personal life.

A series of Timed Exercises are also included in this home study material to give you practice solving problems with whole numbers, fractions, decimals, and percents and to enable you to improve your accuracy and speed. You should complete the Timed Exercises after you complete Part Four: Percents.

You can begin your work in Mastering Math any time now, or you may choose to continue to Module 3 Table Interpretation.

DEVELOPMENTAL SUGGESTIONS

To improve your math skills:

- Enroll in the FutureLink Mastering Math Home Study Course, which includes the content of this packet and additional parts on Algebra and Measurements.
- Find out more about the ALEKS online math courses, which take you from where you need to start based upon a thorough math placement test through advanced math, including College Algebra and Statistics.
- Enroll in a math course online or at your local college, particularly if you need more assistance or you want to learn more challenging math.
- Get books from your local library or bookstore on math. Be sure that the books offer practice problems that include answers. Work the problems.
- Find websites that give tips and techniques and offer practice solving math problems of the types you need to work on or those in which you are interested.
- Seize everyday real-life opportunities to practice your math skills. Be mindful of the processes involved in computing a tip in a restaurant or calculating sales tax on a retail purchase. Pay greater attention to the problem, the operations that work, and any shortcuts you can use to increase your speed.
- If you have children or nieces or nephews, help them with their math homework. You may be surprised at what you might learn in the process.

YOU ARE NOW READY TO PROCEED TO MODULE 3: TABLE INTERPRETATION.

MODULE 3: TABLE INTERPRETATION

In Verizon's Associate jobs, employees sometimes use tables to find information and to interpret this information. Information stored in tables may include work schedules, customer records, equipment data, etc. The Table Interpretation subtest measures your ability to locate and understand information presented in this format.

The test contains four tables, each followed by questions about the table. Each table contains all of the information you need to answer the questions. You may refer to the table as often as you like. When answering the questions, use only the information provided in the table. You do not need previous experience or knowledge of Verizon to answer the questions correctly.

Some questions in the Table Interpretation subtest require that you find information on the table; other questions require that you interpret the information to answer the question. Some questions will require that you perform calculations using the data from the tables.

HINTS ON INTERPRETING TABLES:

- Look at the title of the table to understand what the table is all about and the kind of information that it will provide. Get a general sense of what is going on in the table.

- Look at the columns (these are vertical: running up and down) and the rows (these are horizontal: running across) to find out the nature of the information and how it is presented. Columns and rows provide organization to the information and structure to the table.

- Use the whole table and nothing but the table. Use the information that is provided in the table but do not make assumptions based upon anything that is not there. Do not use information that you may know from your own background or experience but that is not given in the problem. For example, a table that presents information about the temperatures on various days in February 2009 in New York City does not require that you use any information you know or believe to be true about the temperature in New York City. Conversely, a table about telephone land lines does not require you to know anything about land lines that is not part of the table, so do not make assumptions or draw conclusions about this based upon your background or experience (or lack of).

- Read the questions carefully, making certain that you understand what they are asking you to find or understand from the table. Tables present a great deal of information in a very concise and well-organized format. Be sure you understand the question and what it is asking.

- If you must perform a calculation, perform it carefully and accurately. Answer choices are often provided for calculations performed incorrectly; therefore, just because your calculation is listed as one of the possible answer choices does not make it correct.

- Use the process of elimination to help determine the correct answer, especially when you are unsure of the correct answer. Remember: on the TSA, it is best to answer every item.

- Pay attention to language. Look for words such as "total," which means that you combine or add amounts or numbers; words like "difference," which means that you subtract amounts or numbers; and phrases such as "how many times," which asks you to ascertain how something has increased relative to the original number or amount.

- Refer to the table as often as you need. On the TSA, you will be able to refer to the tables as you answer the questions. You are not required to remember the data and information on the table, as you will continue to have the table available while you complete the questions.

Here's a sample problem to allow you to see the types of problems you will encounter in the Table Interpretation subtest on the TSA.

SAMPLE PROBLEM

Table					
Order List for Dormitories, State College					
Order Number	Customer Address	Customer Number	Services Ordered	Cable Required	Co-Signer Required
205	Apt 37 Tower	8872182	Data, Voice	39 FT	Yes
206	Apt 38 Garden	9855425	Data, Voice, Video	56 FT	Yes
207	Apt 15 Tower	4156659	Data, Voice, Video	28 FT	No

1. What is the Customer Number of the customer ordering data, voice, and video in the Tower?
   A. 8872182
   B. 9855425
   C. 4156659

   The answer is C. To find this answer, you need to examine the table, scanning the Services Ordered column to find those that are data, voice, and video. Then scan the Customer Address column to find which of those matches is located in the Tower. After doing both, you will find that the answer is Customer Number 4156659.

2. What is the total length of cable needed for the orders that are for data, voice, and video?
   A. 95 FT
   B. 84 FT
   C. 67 FT

   The answer is B. There are two orders for data, voice, and video, and you are asked for the total length of cable needed for these orders; therefore, add 56 FT and 28 FT for a sum of 84 FT.

Now, work a few problems on your own. Check your answers for each practice problem once you complete all of the items for that practice problem.

PRACTICE PROBLEM 1:

Shipping Prices (Retail Prices)							
	Zones L 1&2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
Flat-Rate Envelope	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95
Sm. Flat-Rate Box	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95
Med. Flat-Rate Box	$10.35	$10.35	$10.35	$10.35	$10.35	$10.35	$10.35
Lg. Flat-Rate Box Domestic	$13.95	$13.95	$13.95	$13.95	$13.95	$13.95	$13.95
Lg. Flat-Rate Box Overseas	$11.95	$11.95	$11.95	$11.95	$11.95	$11.95	$11.95
Weight Not Over 1 lb.	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95	$4.95
Weight Not Over 2 lbs.	$4.95	$5.20	$5.75	$7.10	$7.60	$8.10	$8.70
Weight Not Over 3 lbs.	$5.50	$6.25	$7.10	$9.05	$9.90	$10.60	$11.95
Weight Not Over 4 lbs.	$6.10	$7.10	$8.15	$10.80	$11.95	$12.95	$14.70
Weight Not Over 5 lbs.	$6.85	$8.15	$9.45	$12.70	$13.75	$15.20	$17.15
Weight Not Over 6 lbs.	$7.55	$9.25	$10.75	$14.65	$15.50	$17.50	$19.60

1. How much more does it cost to ship a large flat-rate box within the U.S. than it does to ship it overseas?
   A. $2.00
   B. $2.95
   C. $3.95

2. How much more does it cost to send a 3-pound package to someone in Zone 8 than it does to send it to someone in Zone 2?
   A. $5.45
   B. $5.50
   C. $6.45

3. What is the price difference to send a 5 lb., 12 oz. package to Zone 5 than to send the same package to Zone 4?
   A. $3.90
   B. $5.25
   C. $4.75

4. What is the cost of sending one flat-rate envelope and two small flat-rate boxes to Zone 5?
    A. $12.95
    B. $14.85
    C. $13.85

5. What is the cost of sending a 4-lb. package and a 4 lb., 10 oz. package to Zone 6?
    A. $25.70
    B. $22.90
    C. $27.50

Answer Key

1. A
2. C
3. A
4. B
5. A

Most of these problems require that you locate specific information on the table and then:
Find the difference between sending a package to two different zones
-or-
Find the total of shipping more than one package to different zones
-or-
Find the total of sending multiple packages of different weights.

Finding the difference requires that you subtract and literally find the numeric difference between two prices. Finding the total or sum requires that you add. In these problems, as with many you will be answering, the calculations are not difficult, but you must be cautious not to make careless mistakes and pay attention to choose the correct mathematical operation for solving the problem. Read the question closely and be mindful of following the correct columns and rows.

PRACTICE PROBLEM 2:

FiOS Speed			
DOWNLOAD ACTIVITY			
	File Size	**FiOS (50 Mbps)**	**Cable (10 Mbps)**
Watch a Movie Trailer	5 MB	0.8 seconds	1 second
Download 10 Songs	50 MB	8 seconds	10 seconds
Download Software	75 MB	12 seconds	15 seconds
View a Video Game Demo	125 MB	20 seconds	24 seconds
Download a 2-Hour Movie	6 GB	16 minutes	20 minutes
UPLOAD ACTIVITY			
	File Size	**FiOS (20 Mbps)**	**Cable (2 Mbps)**
Post a Video Clip	5 MB	2 seconds	20 seconds
Email a Large File	10 MB	4 seconds	40 seconds
Share a Photo Album	50 MB	20 seconds	3.3 minutes
Upload a Full Video	500 MB	3.3 minutes	33 minutes

1. With FiOS, how long would it take to download a 75-MB file?
   A. 12 seconds
   B. 15 seconds
   C. 20 seconds

2. How much longer would it take to download a 2-hour movie with cable than to download the same movie with FiOS?
   A. 16 minutes
   B. 4 minutes
   C. 20 minutes

3. To post a video clip, how many times slower is cable than FiOS?
   A. 20 times
   B. 10 times
   C. 5 times

4. How long would it take to download 30 songs with FiOS?
   A. 30 seconds
   B. 24 seconds
   C. 8 seconds

5. How much longer would it take to email a large file of 10 MB with cable than it would with FiOS?
   A. 4 seconds
   B. 40 seconds
   C. 36 seconds

Answer Key

1. A
2. B
3. B
4. B
5. C

Most of these questions require that you find the difference between two download or upload activities. In order to do so, you must subtract one amount of time from another.

Question 3 asks how many times slower cable is than FiOS when posting a video clip. This is a different calculation in that you are asked about a relationship that involves a multiplier (How many times?) instead of a relationship that involves subtraction and finding the difference. FiOS takes 2 seconds; cable takes 20 seconds; therefore, FiOS is 10 times faster than cable and cable is 10 times slower than FiOS.

Question 4 asks how long it would take to download 30 songs with FiOS. The table shows that 10 songs can be downloaded in 8 seconds; therefore, 30 songs can be downloaded in 3 X 8 seconds, or 24 seconds.

Question 5 asks how much longer it would take to email a large file of 10 MB with cable than it would to do the same with FiOS. From the table you will see that cable takes 40 seconds and that FiOS takes 4 seconds; therefore, the difference is 36 seconds. (If you had been asked how many times slower is cable than FiOS in emailing a large file of 10 MB, the answer would be 10 times slower since FiOS takes 4 seconds and cable takes 40 seconds.

PRACTICE PROBLEM 3:

Mobile, Entertainment, Communications Expenditure Per User (MECEPU)		
	Month	Year
Voice (Wireline)	$25	$300
Voice (Mobile)	$50	$600
Data (Home)	$50	$600
Data (Broadband Wireless)	$20	$240
Data (Mobile)	$10	$120
Video (Home)	$100	$1,200
Old Media (Newspaper)	$20	$240
Old Media (Books)	$75	$900
Old Media (Magazines)	$20	$240
Music	$75	$900
Movies	$25	$300
Gaming	$10	$120
Web Page Subscriptions	$20	$240
TOTALS	$500	$6,000

	Month	Year
Low MECEPU	$150	$1,800
Medium MECEPU	$500	$6,000
High MECEPU	$1,000	$12,000

1. On which form of entertainment and communications does the average user spend the most?
    A. Video (Home)
    B. Music
    C. Data (Home)

2. Of the three types of old media, on which type does the average user spend the most?
    A. Newspapers
    B. Magazines
    C. Books

3. How many more times does the average user spend on mobile voice services than on wireline voice services?
    A. $300
    B. 2
    C. 3

4. How much more does the average user spend on music than on movies in one month?
    A. $75
    B. $25
    C. $50

5. On which of the following forms of entertainment and communications does the average user spend the same yearly?
    A. Books and music
    B. Newspapers and gaming
    C. Home video and home data

6. During a single year, how much more does the average user spend on newspapers, books and magazines than on music and movies?
    A. $120
    B. $140
    C. $180

7. In a six-month period, how much less does the average user spend on music, movies, and gaming than on mobile voice, mobile data, and home video?
    A. $600
    B. $260
    C. $300

Answer Key

1. A
2. C
3. B
4. C
5. A
6. C
7. C

Questions 1 and 2 require that you simply locate data from the table.

Question 3 asks how many times more does the average user spend on mobile voice services than on wireline services. It does not matter at which interval you look (month or year) as the average mobile user spends twice as much on average during both one month and one year.

Question 4 asks that you determine the difference between the amount the average user spends on music than on movies in one month. The average user spends $75 on music and $25 on movies; therefore, the average user spends $50 more on music.

In Question 5, you must scan the table to determine on which pairing the average user spends the same amount. You must examine each pair and determine the costs on the table and whether the two expenditures match. The match, A, is your answer.

Question 6 requires that you find the total for newspapers, books, and magazine ($1,380) and the total for music and movies ($1,200) and then subtract to find the difference ($180).

Question 7 asks you to compare the average user's expenditures during a six-month period rather than during a monthly or yearly period. The sum of music, movies, and gaming during one year would be $1,320 so the six-month period would be $660. The sum of mobile voice. mobile data, and home video for one year would be $1,920 so the six-month period would be $960. The difference is $300.

PRACTICE PROBLEM 4:

Weekend Work Schedule - First Quarter
X indicates that the employee is scheduled to work that weekend.

	Phil	Arlene	Juan	Chan
Weekend 1	X	X	X	
Weekend 2	X	X		X
Weekend 3		X	X	X
Weekend 4	X		X	
Weekend 5		X	X	X
Weekend 6	X		X	X
Weekend 7	X	X		X
Weekend 8		X	X	X
Weekend 9	X		X	
Weekend 10		X	X	X
Weekend 11	X	X	X	
Weekend 12	X	X	X	X

1. On which weekend does the greatest number of employees work?
    A. Weekend 4
    B. Weekend 11
    C. Weekend 12

2. On which weekends do two employees work?
    A. Weekend 4 and Weekend 6
    B. Weekend 7 and Weekend 9
    C. Weekend 4 and Weekend 9

3. How many more weekends does Juan work than Chan?
    A. 3
    B. 8
    C. 2

4. On which two consecutive weekends do the most employees work?
    A. Weekends 10 and 11
    B. Weekends 11 and 12
    C. Weekends 5 and 6

5. Who was the only employee in weekends 1 through 6 not to work the same number of weekends as the other employees?
    A. Juan
    B. Arlene
    C. Phil

Answer Key

1. C
2. C
3. C
4. B
5. A

Question 1 requires that you examine each of the twelve weekends to determine on which weekend the most employees work. All four employees work on weekend 12. This is a question where you can save time by trying each answer rather than examining the entire table seeking the answer.

Question 2 requires that you scan the weekends to determine on which weekends two employees work. Weekends 4 and 9 are the weekends on which two employees work. There are two approaches that work for solving a problem such as this one. You can scan each weekend to find those weekends on which two employees work, and as soon as you determine the second weekend, you will have found the answer (C). You know there are only two weekends because each answer choice consists of two weekends. Another approach is to work from the answer choices. Check each answer choice to determine if it is correct. For example, in answer choice A, you would check to see if two employees work on weekends 4 and 6. Then you would move on and check answers B and C.

Question 3 asks that you find home many more weekends Juan works than Chan. You would count the total weekends marked in the column titled Juan and the total weekends marked in the column titled Chan. Juan works 10; Chan works 8. Subtract for the difference and you find that Juan works two more weekends than Chan; therefore, the correct answer is C.

Question 4 asks that you examine consecutive weekends to determine the two weekends in a row on which the most employees work. In this case, it is likely easier and faster to check the answer choices rather than going down the list looking at every pair of consecutive weekends. In checking the answer choices, you find that answer B is correct. A total of 7 employees work on weekends 11 and 12.

Question 5 asks you to find the employee who works a different number of weekends from the other employees during weekends 1 through 6. During weekends 1 through 6, Phil, Arlene, and Chan each work 4 weekends while Juan works 5 weekends during that period. The correct answer is A because Juan is the only employee during that period to work 5 weekends.

DEVELOPMENTAL SUGGESTIONS

Now that you have been exposed to the types of problems you will encounter on the Table Interpretation subtest, here are some suggestions for further improving your abilities to use and interpret tables:

- Look closely at tables included in newspapers or other reading material of interest to you. You can find other tables of information in bus or other transportation schedules, textbooks on many subjects, price lists, clothing size charts, nutrition information on food packages, sports statistics, and so on.
- Work to understand the information in a table and how it is arranged. The more you practice reading tables, the easier it will become.
- Explain a table to someone else, and then ask him or her to look at the same table and judge whether or not your explanation is accurate.
- Practice quick calculations with whole numbers and decimals to increase your speed and accuracy. The math material that is part of the Preparation for the TSA Home Study Course should be useful.
- Ask yourself questions (or have a friend do it) that can be answered using a table. (For example, how many direct flights run from New York to Los Angeles each day? How many of these flights depart before noon?)
- Look for additional references and practice questions using the Internet, a library, or bookstore.

YOU ARE NOW READY TO PROCEED TO MODULE 4: REASONING.

MODULE 4: REASONING

Employees in Verizon's Associate jobs use reasoning and logic skills when performing a variety of jobs, including troubleshooting problems, determining how to overcome unexpected difficulties or obstacles, and deciding how best to accomplish assigned work tasks.

The Reasoning subtest on the TSA measures the ability to make valid and logical decisions based upon a set of facts. A logical reasoning problem on this subtest contains a set of given facts. Each fact set is followed by a number of conclusions. Your task is to use the set of facts to determine whether each conclusion is true, false, or cannot be determined based upon the facts.

In this section of the Home Study Course, you will study basic logic and reasoning to be able to improve your ability to solve logic problems. Here's an example of the type of problem you may encounter:

EXAMPLES:

FACTS

A private school is reducing tuition by 5% if the tuition is paid prior to September 1 and by 6% if the tuition is paid by August 1 of any academic year. Lauren, who attends this school, paid her tuition on August 15 while Miranda paid her tuition on July 30.

1. Lauren will be eligible for a tuition discount of 5%.
    A. True
    B. False
    C. Can't tell

    The correct answer is A because Lauren paid her tuition by September 1.

2. Miranda pays less tuition than Lauren.
    A. True
    B. False
    C. Can't tell

    The correct answer is C because although we do know that Miranda receives a greater discount by paying earlier than Lauren, we do not know if their tuition is the same before the discount is factored in.

Before you begin solving more complicated logic and reasoning problems, let's work a few more examples that provide only one fact that is followed by one conclusion. You will be asked to determine if that one conclusion is true, false, or whether you cannot tell from the facts given. In these examples, the answers are given immediately after each problem. The explanations for each answer should help you train yourself to become better at logical thinking and reasoning.

1. If you like spinach, your grandmother will buy you a present. You don't like spinach. Grandma will not buy you a present.
    A. True
    B. False
    C. Can't tell

    The answer is A because grandma's buying you a present is conditional ("if"), that is to say that it is contingent upon you liking spinach, and you do not.

2. If tomatoes are on sale today, Carmen will make submarine sandwiches. Sandra is not making submarine sandwiches. Tomatoes are not on sale today.
    A. True
    B. False
    C. Can't tell

    The answer is C because while we know the relationship between the tomatoes being on sale and what Carmen will make, we do not know the relationship between the tomatoes being on sale and what Sandra will make.

3. The tires must be replaced if the wear indicators are showing. The tires must be replaced. The wear indicators are showing.
    A. True
    B. False
    C. Can't tell

    The answer is C because the tires could require replacement for other reasons.

4. You will scold the carpenter if the shelf does not fit. I see you scolding him. The carpenter had made a shelf that does not fit.
    A. True
    B. False
    C. Can't tell

    The answer is C because you could be scolding the carpenter for reasons other than the shelf's not fitting.

5. This is either a dictionary or a chemistry book. This is not a dictionary. It is a chemistry book.
    A. True
    B. False
    C. Can't tell

    The answer is A because there are only two choices and they are either this or that, not both or other so if the book is not a dictionary, it must be a chemistry book.

6. Either the lock is broken or something is wrong with the key. The lock is broken. There cannot be anything wrong with the key.
    A. True
    B. False
    C. Can't tell

    The answer is A because there are only two choices and they are either this or that, not both or other so if the lock is broken, the key must be fine.

7. A band-saw cannot be both durable and inexpensive. This band saw is expensive. It must be durable.
    A. True
    B. False
    C. Can't tell

    The answer is C because while we know what a band-saw cannot be (both durable and expensive), this does not dictate what it can be (durable and expensive, not durable and inexpensive.)

8. The patient cannot be both completely healthy and have a blood pressure of more than 150/100. The patient is not completely healthy. He must have a blood pressure of more than 150/100.
    A. True
    B. False
    C. Can't tell

    The answer is C because there could be reasons other than high blood pressure that the patient is not completely healthy.

9. This plant cannot be both a fungus and a photosynthesizing plant. It is conducting photosynthesis. It cannot be a fungus.
    A. True
    B. False
    C. Can't tell

    The answer is A because there are only two choices and they are either this or that, not both or other. So if the plant is photosynthesizing, it is not a fungus. (Note that in this problem there are several terms that are scientific, yet your ability to solve the logic problem is not dependent upon your knowledge of the scientific terms.)

10. The cause of the noise in the car is due to two possibilities: either the timing belt is worn or the fuel pump is defective. The fuel pump checks out. The timing chain is not worn.
    A. True
    B. False
    C. Can't tell

    The answer is B because there are only two choices and they are either this or that, not both or other. So if the fuel pump checks out, the timing belt must be worn.

TIPS AND TECHNIQUES FOR SOLVING REASONING PROBLEMS

Here are some tips and techniques for solving more advanced and complicated logical reasoning problems:

- Read all the facts presented to you carefully.
- Pay attention to the order in which the facts are presented as one fact may lead you to a conclusion useful in determining the truth of a subsequent fact.
- Look for words that dictate or limit. Examples include "must," "if," "both," "either," "or," "only."
- If the problem has lots of entities (for example, persons), create a table of chart with one type of entity on one axis (horizontal or vertical line) and one on the other. Enter the information from the facts given on the chart or table.
- Verify whether the facts are true or false or whether you cannot tell.
- Select "can't tell" when you do not have enough information to ascertain if the fact is true or false. Don't confuse "false" and "can't tell."

Now, here's a sample problem more like those on the actual TSA.

SAMPLE

FACTS

Four women are at a jewelry store after lunch to have their engagement rings cleaned. Each of the women became engaged a different number of months ago.

Donna became engaged 8 months ago.

Rhonda became engaged exactly 2 months after Donna.

Marla became engaged exactly 3 months before Donna.

1. Rhonda became engaged exactly 6 months ago.
    A. True
    B. False
    C. Can't tell

    The correct answer is A. Since Donna became engaged 8 months ago, and Rhonda became engaged exactly 2 months after Donna, Rhonda became engaged 6 months ago.

2. Marla became engaged 5 months ago.
    A. True
    B. False
    C. Can't tell

    The correct answer is B. Marla became engaged exactly 3 months before Donna who became engaged 8 months ago; therefore, Marla became engaged 11 months ago.

3. Rhonda became engaged in November, which was exactly 2 months after Donna.
    A. True
    B. False
    C. Can't tell

    The correct answer is C. While we know that Rhonda became engaged 2 months after Donna, we do not have enough information to know if this was or was not the calendar month of November.

4. Patrice became engaged 7 months after Donna.
    A. True
    B. False
    C. Can't tell

    The correct answer is C. We are told that four women are at a jewelry store to have their engagement rings cleaned. We are given the names of three of the women. We have no information about Patrice or even if she is the fourth in this group of women.

Here are five practice problems. The answer key to each practice problem follows the after all parts of the question are asked.

PRACTICE PROBLEM #1

FACTS

Every Sales Associate receives a pay increase on January 1, 2010 except those who have less than six months' service.

Carla's increase was twice as much as Raul's increase.

Carla's increase was half as much as Jason's raise.

Jason's increase was the same as Portia's increase.

Steve began working on September 12, 2009.

1. Carla's increase was half as big as Portia's increase.
    A. True
    B. False
    C. Can't tell

2. Raul's raise was half as big as Carla's.
    A. True
    B. False
    C. Can't tell

3. Portia's increase was twice as big as Jason's increase.
    A. True
    B. False
    C. Can't tell

4. Steve's increase is twice as big as Carla's increase.
    A. True
    B. False
    C. Can't tell

5. Jason's pay is the same as Portia's pay.
    A. True
    B. False
    C. Can't tell

6. Steve earns the same amount as Carla. When Steve is eligible for a raise, he will get the same increase that Carla got.
    A. True
    B. False
    C. Can't tell

Answer Key

1. The correct answer is A. We know that Carla's increase was half as big as Jason's and that Jason's increase was equal to Portia's increase. Therefore, Carla's increase was half as big as Portia's raise.

2. The correct answer is A. We know that Carla's raise was twice as much as Raul's, which is another way of saying that Raul's raise was half as big as Carla's.

3. The correct answer is B. We know that Jason's increase was the same as Portia's, which is the same as saying that Portia's increase was the same as Jason's.

4. The correct answer is B. We know that employees with less than six months' service are ineligible for raises and that Steve has only been an employee since September 12, 2009, which is less than six months ago from January 1, 2010.

5. The correct answer is C. The set of facts given here tells us about raises, it does not tell us anything about salaries.

6. The correct answer is C. There is no way of knowing what factors play into an employee's raise or of predicting the amount of the increase regardless of base salary being the same.

PRACTICE PROBLEM #2

FACTS

June, Beatrice, and Kris each have one pet.

Each owns a different type of pet than the others.

June's pet is a parakeet.

Kris's pet does not have a beak.

Beatrice's pet lives in a tank.

1. Beatrice's pet is a fish.
    A. True
    B. False
    C. Can't tell

2. June and Kris each own a dog.
    A. True
    B. False
    C. Can't tell

3. Kris's pet is not a bird.
    A. True
    B. False
    C. Can't tell

4. June's pet is a bird.
    A. True
    B. False
    C. Can't tell

5. Beatrice has the smallest pet.
    A. True
    B. False
    C. Can't tell

Answer Key

1. The answer is C. While we know that Beatrice's pet lives in a tank and that fish live in tanks, it is also possible for other pets like reptiles and amphibians to live in tanks. Therefore, it is impossible to tell if Beatrice's pet that lives in a tank is a fish.
2. The answer is B. The three all have different pets, thus, June and Kris cannot both have dogs.
3. The answer is A. We are told that Kris's pet does not have a beak. As all birds have beaks, we know that her pet is not a bird.
4. The answer is A. We know that June's pet is a parakeet and as parakeets are birds, we can say that June's pet is a bird.
5. The answer is C. No information is given about the sizes of the pets and although Beatrice's pet fits in a tank, there is no way to know how small or large it is with regard to the other pets.

PRACTICE PROBLEM #3:

FACTS

Mrs. Jacks has three daughters: Rhona, Toni, and Melba.

Rhona, Toni, Melba are sisters.

The ages of the three girls are 9, 12, and 14 years.

Toni's age is not a multiple of 4.

Melba's age can be divided exactly by the number of days in a week.

Mrs. Jacks also has a son named Gerard.

1. Melba is 12 years old and Toni is 9 years old.
    A. True
    B. False
    C. Can't tell

2. Melba is 14 and Toni is 12.
    A. True
    B. False
    C. Can't tell

3. Rhona is 12 years old.
    A. True
    B. False
    C. Can't tell

4. Gerard is 9 years old.
    A. True
    B. False
    C. Can't tell

5. In two years, Toni will be 3 years older than Rhona and 5 years younger than Melba.
    A. True
    B. False
    C. Can't tell

6. Rhona is older than Toni but younger than Melba.
    A. True
    B. False
    C. Can't tell

Answer Key

1. The answer is B. We know that Melba's age can be divided exactly by the number of days in a week, and 12 cannot be divided into evenly by 7.

2. The answer is B. Toni's age is not a multiple of 4, which means that she cannot be 12 (3x4).

3. The answer is A. If we know that Melba is 14 and Toni is not 12, the only age that Toni could be is 9, which leaves Rhona as the 12-year-old.

4. The answer is C. We know nothing about Gerard's age and while we do know that Rhona is 9, Gerard could be her fraternal twin, also aged 9.

5. The answer is B. No matter how many years pass, Toni will never be older than Rhona.

6. The answer is A. We discover this by creating a table and using a process of elimination.

If you wanted to create a table to keep all of the facts organized and easy to understand, you could do so by placing the ages on one axis (horizontal, for example) and the names on the other axis (vertical). Your chart might look something like this:

	9 years	12 years	14 years
Rhona	?	?	?
Toni	?	?	?
Melba	?	?	?
Gerard	?	?	?

Then, you would enter what you could figure out by the facts provided.

	9 years	12 years	14 years
Rhona	NO	YES	NO
Toni	YES	NO	NO
Melba	NO	NO	YES
Gerard	?	?	?

PRACTICE PROBLEM #4:

FACTS

Lea, Eva, and Bianca work as hostess, chef, and waitress.

The hostess, who is single, is the shortest of the three.

Lea, who is Eva's daughter-in-law, is taller than the waitress.

1. Lea works as the chef.
   A. True
   B. False
   C. Can't Tell

2. Eva is taller than Lea
   A. True
   B. False
   C. Can't Tell

3. Both Eva and Lea are married.
   A. True
   B. False
   C. Can't Tell

4. Lea, Eva, and Bianca all work at the same restaurant.
   A. True
   B. False
   C. Can't tell

Answer Key

1. The answer is A. We know that Lea works as the chef because we are told that the hostess is the shortest of the three and that Lea is taller than the waitress. If Lea is taller than the waitress, she cannot be the waitress. If she is taller than someone else, she is not the shortest and thus she is not the hostess, leaving the only possible job for Lea as that of chef.

2. The answer is B. We've discerned that Lea is the chef, which leaves hostess and waitress as the other two occupations for Eva and Bianca. We are told that the hostess is the shortest of the three and that Lea is taller than the waitress, which means that no one is taller than Lea.

3. The answer is C. We can discern all of the women's jobs and order of height. In terms of relationships, we know only that the hostess is single and that Lea is Eva's daughter-in-law, which means that Lea is married to Eva's son. We cannot know Eva's relationship status.

4. The answer is C. There is no way of telling if the women all work in the same restaurant.

PRACTICE PROBLEM #5:

FACTS

Four college basketball players are waiting for tryouts with the Timberwolves.

None of the four is the same height.

No player is taller than a player who is older.

Charla is taller than Sandy and Denise.

Ronnie is older than Charla.

Sandy is shorter than Denise.

1. Sandy is the shortest of the four players.
   A. True
   B. False
   C. Can't tell

2. The player who is the oldest is the shortest.
   A. True
   B. False
   C. Can't tell

3. Ronnie is the most likely to make the team.
   A. True
   B. False
   C. Can't tell

4. Sandy is older than all the others.
   A. True
   B. False
   C. Can't tell

5. Charla is older than both Denise and Sandy.
   A. True
   B. False
   C. Can't tell

Answer Key

1. The answer is A. By creating a chart and plugging in the facts, we are able to ascertain that this is true and that Charla, Ronnie, and Denise are all taller and older than Sandy.

2. The answer is B. We are told that "No player is taller than a player who is older," which is another way of saying that in this question, age and height correspond and that the order for both is the same. Therefore, one cannot be both the oldest and the shortest.

3. The answer is C. We know that Ronnie is the tallest and oldest of the players trying out, we do not know anything about her basketball skills or what the team is looking for. That said, we cannot know if Ronnie is the most likely to make the team.

4. The answer is B. We are told that other players are taller than Sandy and we know that any player who is taller is also older.

5. The answer is A. We are told that Charla is taller than Sandy and Denise. This means that Charla is also older than Sandy and Denise.

If you wanted to create a table to keep all of the facts organized and easy to understand, you could do so by placing the ages and relative heights on one axis (horizontal, for example) and the names on the other axis (vertical). Your chart might look something like this:

	Tallest/Oldest	Second Tallest/Oldest	Third Tallest/Oldest	Shortest/Youngest
Charla	?	?	?	?
Sandy	?	?	?	?
Denise	?	?	?	?
Ronnie	?	?	?	?

Then, you would enter what you could figure out by the facts provided.

	Tallest/Oldest	Second Tallest/Oldest	Third Tallest/Oldest	Shortest/Youngest
Charla	NO	YES	NO	NO
Sandy	NO	NO	NO	YES
Denise	NO	NO	YES	NO
Ronnie	YES	NO	NO	NO

DEVELOPMENTAL SUGGESTIONS

To improve your logic and reasoning skills further:

- Study books that explain how to solve logic-based problems (for example, deductive reasoning problems)
- Find books and magazines that have logic problems and puzzles to solve. Work the exercises.
- Look for additional references and practice questions using the Internet, a library, or bookstore.

YOU ARE NOW READY TO PROCEED TO MODULE 5: CHECKING FOR ACCURACY.

MODULE 5: CHECKING FOR ACCURACY

Accuracy is a key requirement for many Associate jobs. Employees must be able to quickly and accurately compare pieces of information, such as new and revised lists of customer names and account numbers or inventory control sheets. Associates use this ability when looking up customer or equipment information; proofreading documents such as work orders or correspondence; or comparing customer service or billing orders. There is almost no job at Verizon that does not require some proficiency at working quickly and accurately.

The Checking for Accuracy subtest measures the ability to attend to details, find errors in printed information, and identify when everything is correct and there are no errors. You will be given a "Correct List" that contains several lines that may contain names, addresses, numbers, or codes and consists of three sections. Next to the "Correct List" will be a "List to Be Checked" that is also divided into three sections. The "List to Be Checked" should be exactly the same as the "Correct List," but the "List to be Checked" may contain errors. Your task is to compare the lists and to determine if there are errors and, if so, how many of the three sections contain errors. Your score depends on how accurately you can compare all of the lines in the two lists.

Test Instructions and Sample Items

Instructions: In this section, you will check the accuracy of a list by comparing it to a master list, or "Correct List." You will be asked to check the "List to Be Checked" using the "Correct List" and to identify the number of sections, if any, that have errors in the "List to be Checked."

The response options for each item are as follows:

A. 0 sections. There are no errors; the entry in the "List to Be Checked" is exactly the same as the entry in the "Correct List."
B. 1 section. There is an error in one section. In other words, one section in the "List to Be Checked" does not match the corresponding section in the "Correct List."
C. 2 sections. There are errors in two sections. In other words, two sections in the "List to Be Checked" do not match the corresponding sections in the "Correct List."
D. 3 sections. There are errors in all three sections. In other words, three sections in the "List to Be Checked" do not match the corresponding sections in the "Correct List."

SAMPLE ITEMS

Response Options

A = 0 sections **B = 1 section** **C = 2 sections** **D = 3 sections**

	Correct List			List to Be Checked		
	Code	Start Date	End Date	Code	Start Date	End Date
1.	HND-3151	8/14/2004	8/12/2006	HND-3151	8/14/2004	8/12/2006
2.	STR-2439	11/15/2003	3/7/2008	STR-2439	11/15/2003	3/17/2008
3.	DZL-0784	6/9/2002	6/8/2004	DZI-0784	9/8/2002	6/9/2004

Answers:

Line 1: A is the correct answer choice because all three parts of the "List to Be Checked" are the same at all three parts in the "Correct List." Everything matches, nothing is different.

Line 2: B is the correct answer choice because the "End Date" in the "List to Be Checked" does not match the "End Date" in the "Correct List." 3/17/2008 does not match 3/7/2008.

Line 3: D is the correct answer because all three parts of the "List to Be Checked" do not match the three parts in the "Correct List." DZI-0784 does not match DZL-0784. 9/8/2002 does not match 6/9/2002. 6/9/2004 does not match 6/8/2004.

TIPS AND TECHNIQUES FOR CHECKING FOR ACCURACY

- Remember that any difference means that the items are different and do not match. It is correct that "avenue" and "ave." mean the same thing, but they are not the exact same.
- Read the long numbers or addresses in your mind to be able to compare them. Break them into manageable parts to compare them. In other words, when you compare an order number in the "List to be Checked," such as RD3645783429, break it into parts which you say in your mind, for example, RD36457 83429. Get into a rhythm.
- Once you locate a difference, quickly move to the next section in the line, but keep careful track of the number of errors you have found in that line so that you don't have to go back to find if there were two errors or three errors.
- When you check the three parts of each item, keep track in your mind the number of parts you find that do not match. In other words, when you get to the second part, you must remember whether the first part was or was not a match. When you reach the third part, you must recall.
- If the first and second parts were or were not matches. Keep track so that you do not have to go back and look at each part again.
- Work quickly. Remember that it's not so difficult to compare items in the lists if you had a very long time to do so. You are trying for speed and accuracy and for completing as many items as you can.

PRACTICE EXERCISE #1:

As a warm-up, compare the item in Column 1 with the item in Column 2. Circle "S" for "Same" or "D" for "Different" to indicate if they match or do not match. Do as many as you can in 60 seconds. Set a timer or have someone time you. If you do not complete all items before time is called, go back and complete any remaining items for additional practice. This exercise is different from what you will do on the actual TSA practice problems in this study material and from the actual items on the Checking for Accuracy subtest on the TSA. It will give you some practice comparing items to determine if they are the same or different before attempting the more difficult problem type on the test.

	COLUMN 1	**COLUMN 2**		
1.	909 Sunset Road	919 Sunset Road	S	D
2.	1615 Belaire Drive	1615 Belair Drive	S	D
3.	076594362FDY	076594362FTY	S	D
4.	133124635CV02	133124635CV02	S	D
5.	Marshall Goodman, M.D.	Marshall Goldman, M.D.	S	D
6.	Alexis Young Bowen	Alexis Young Bowen	S	D
7.	Florence Carter	Florenze Carter	S	D
8.	HD728563476989	HD728563478989	S	D
9.	#@&^*($%^$^	#@&^*($%^$^	S	D
10.	C?M?&&34527	C?M?&&345275	S	D
11.	4089 Parsonage Drive	4089 Parsonage DR.	S	D
12.	Elegante Forest Condos	Elagante Forest Condos	S	D
13.	Butler Estates by the Sea	Butler Estates By the Sea	S	D
14.	MNMNNN9897	MNMNMN9897	S	D
15.	12867 Cliveden Lane	12867 Cliveden Lane	S	D
16.	SBVR753867342556	SBVR753867342566	S	D
17.	Fischer Cleaning Services	Fisher Cleaning Services	S	D
18.	Mary Louise O'Riley	Mary Louisa O'Riley	S	D
19.	#2173349845328	#2173349846328	S	D
20.	Raymond Hoffstedter	Raymond Hoffstetter	S	D
21.	Carson Cruikshank	Carson Crukshank	S	D
22.	?673@9ZTV?!!	?673@9VT?!!	S	D
23.	Pritikin, Morrisey	Pritikin, Morrisey	S	D
24.	Lauretta Bouganvillea	Lauretta Bouganvilea	S	D
25.	753426987TP269	753426987TP269	S	D

Answer Key

1. D	6. S	11. D	16. D	21. D
2. D	7. D	12. D	17. D	22. D
3. D	8. D	13. D	18. D	23. S
4. S	9. S	14. D	19. D	24. D
5. D	10. D	15. S	20. D	25. S

Now, let's practice some problems more closely related to those on the Checking for Accuracy subtest of the actual TSA.

Instructions: In this section, you will check the accuracy of a list by comparing it to a master list, or "Correct List." You will be asked to check the "List to Be Checked" using the "Correct List" and to identify the number of sections, if any, that have errors in the "List to be Checked."

The response options for each item are as follows:

A. 0 sections. There are no errors; the entry in the "List to Be Checked" is exactly the same as the entry in the "Correct List."
B. 1 section. There is an error in one section. In other words, one section in the "List to Be Checked" does not match the corresponding section in the "Correct List."
C. 2 sections. There are errors in two sections. In other words, two sections in the "List to Be Checked" do not match the corresponding sections in the "Correct List."
D. 3 sections. There are errors in all three sections. In other words, three sections in the "List to Be Checked" do not match the corresponding sections in the "Correct List."

PRACTICE EXERCISE #2:

On the answer sheet, circle the letter of the correct answer for each problem.

Response Options

A = 0 sections **B = 1 section** **C = 2 sections** **D = 3 sections**

	Correct List			List to be Checked		
	Code	Start Date	End Date	Code	Start Date	End Date
1.	BRE-24375	9/5/2004	9/6/2007	BRE-24375	9/5/2005	9/6/2007
2.	VDG-67331	8/30/2005	7/15/2007	VDG-67311	8/31/2005	7/31/2009
3.	DT-2322578	4/13/2005	4/12/2007	DT-2322578	4/15/2005	4/12/2007
4.	GR-1328900	4/30/2003	3/31/2009	GR-132890	4/30/2003	4/30/2009
5.	MN-117598	4/30/2009	3/31/2009	MN-115798	4/30/2008	4/31/2009
6.	TT-6753874	4/30/3009	3/31/2009	TT-6753975	4/30/2010	3/30/200

	Correct List			List to be Checked		
	Code	Start Date	End Date	Code	Start Date	End Date
7.	QT-2243611	10/5/2003	10/26/2008	QT-2423611	1/13/2007	12/31/2008
8.	TY-8986899	3/17/2002	3/27/2006	TY-8986898	3/15/2002	3/27/2006
9.	PKA-45287	4/15/2005	4/16/2008	PKA-45287	4/15/2008	4/6/2009
10.	INR-000647	10/15/2001	10/15/2002	INR-00647	10/15/2010	1/24/2010
11.	FBC-2363R	7/14/2009	7/15/2010	FBC-2363P	7/15/2009	7/15/2010
12.	ANC-87954	3/3/2002	3/13/2004	ANC-87994	3/3/2004	3/13/2009

ANSWER SHEET (PRACTICE EXERCISE #2)

1.	A	2.	A	3.	A	4.	A	5.	A	6.	A
	B		B		B		B		B		B
	C		C		C		C		C		C
	D		D		D		D		D		D
7.	A	8.	A	9.	A	10.	A	11.	A	12.	A
	B		B		B		B		B		B
	C		C		C		C		C		C
	D		D		D		D		D		D

ANSWER KEY (PRACTICE EXERCISE #2):

1. B
2. D
3. B
4. C
5. D
6. D
7. D
8. C
9. C
10. D
11. C
12. D

PRACTICE EXERCISE #3:

On the answer sheet, circle the letter of the correct answer for each problem.

Response Options

A = 0 sections **B = 1 section** **C = 2 sections** **D = 3 sections**

	Correct List			List to be Checked		
	Name	Address	ID No.	Name	Address	ID No.
1.	Bernard Ansell	8 Beasley St.	2348	Bernard Ansel	8 Beasley St.	2348
2.	A. Gonzales	92 Ashen Way	4177	A. Gonzales	92 Ashen Way	4117
3.	Paul Machs	34 Pittson	5618	Paul Machs	34 Pitson	5618
4.	Jonathan Ashe	44 Klondike St.	9587	Jonathan Ash	42 Klondike St	9577
5.	Percy Keane	438 Paxton Ave.	9322	Percey Kean	430 Paxton Rd.	9322
6.	Phil O'Rorke	Parkside #8	3854	Phil O'Rourke	Parkside #6	3894
7.	Maria Parks	Etherea Lane	3637	Maria Parkes	Ethereal Lane	3637
8.	Dr. R. Cain	1635 Park St.	7853	Dr. B. Cain	1635 Park St.	7853
9.	Melody Tipton	Columbia Road	0060	Melanie Tipton	Columbian Rd.	0060
10.	Bill Pickett	17 Carlisle #4	5717	Billy Pickett	17 Carlyle #4	5717
11.	Freda Quinto	Taverna Way	6375	Freida Quinto	Taberna Way	6379
12.	Frona Burnside	7 Strattonside	9689	Frona Bernside	7 Strattonside Ln.	9685

ANSWER SHEET (PRACTICE EXERCISE #3)

1. A B C D	2. A B C D	3. A B C D	4. A B C D	5. A B C D	6. A B C D
7. A B C D	8. A B C D	9. A B C D	10. A B C D	11. A B C D	12. A B C D

ANSWER KEY (PRACTICE EXERCISE #3):

1. B
2. B
3. B
4. D
5. C
6. D
7. C
8. B
9. C
10. C
11. D
12. D

DEVELOPMENTAL SUGGESTIONS

To improve your skills with checking for accuracy:

- Find older and newer versions of airline or bus schedules. Place the two versions side-by-side, and then compare them. Identify all the places where the two schedules differ. Check your level of accuracy.
- Ask someone to make up lists similar to the one in the practice questions. Practice comparing the lists. Check your level of accuracy.
- Create other skimming and scanning exercises to increase speed, such as skimming an article in a magazine and circling the letter "a" every time you see it.
- Look for additional references and practice questions using the Internet, library, or bookstore.

YOU ARE NOW READY TO PROCEED TO MODULE 6: TEST-TAKING TIPS.

MODULE 6: TEST-TAKING TIPS

BEFORE THE TEST

- Get adequate rest and sleep the night before the testing.
- Do not eat a large meal before the test as doing so may make you feel tired.
- Pay attention to any instructions you were given when your testing was scheduled. For example, if photo identification or something else is required, be sure to bring the necessary items.
- Dress comfortably for the test setting. If you are a person who easily becomes cold, bring a sweater, just in case. Wear comfortable shoes, and don't wear anything that might be distracting to you, for example, heavy jewelry.
- Recognize that you have taken steps to prepare for the test and have decided to take the test because you feel ready.
- Maintain a feeling of confidence and a "can do" attitude. Many studies show and prove that there is a strong relationship between confidence and success. Believe in yourself and the work you have done to make it this far.
- Recognize that some anxiety about taking the test is normal – and beneficial. As long as your anxiety level is not overwhelming, it can be beneficial in keeping you alert, focused, and sharp.
- Reduce test anxiety and tension by breathing deeply and stretching before the test.
- Focus on the positives. If you are worried about the Reasoning subtest, focus on how strong you are in Math Computation and Reading Comprehension, Table Interpretation and Checking for Accuracy. Remember, the score that qualifies you is a total score on all subtests – not individual scores on each subtest. There will be some areas in which you will feel stronger than others; this is perfectly normal and natural.
- Anticipate what you might expect at the test, for example, computers, other candidates, new surroundings. If you don't know what to expect, find out before the test. You don't want any surprises.
- Be sure you have good directions to the test center, particularly if the test center is one you have never been to or if it is not a Verizon company building.
- When you calculate your travel time to the testing center, be sure to factor in unexpected delays due to traffic and inclement weather. Allow extra time for travel.
- Check to be sure that you have the correct date and time for your testing. Arrive early to give yourself time to feel comfortable and not hurried.
- Do not schedule any appointments after the test session. Doing so might make you feel rushed.
- Leave behind or turn off calculators, cell phones, pagers, music players, etc. You are not allowed to use any of these devices at any time during the testing session.

DURING THE TEST

- Be calm and confident. Don't let anything unexpected upset or alarm you. Keep your cool.
- Read all of the instructions carefully and follow them exactly.
- Read each question and all of the response options completely before choosing an answer.
- Pay attention to words such as "not" and "except."
- All questions are multiple-choice. There are no penalties for guessing. If you are not sure which option to choose, try to narrow down your choices before selecting the best answer.
- If you are stuck on a particular problem, select an answer and continue to the next problem. No problem is worth more points than any other problem. Answer to the best of your abilities and keep moving along.
- Do not over-interpret problems on the test or try to find hidden meanings. Questions may be challenging, but they are not designed to be tricky.
- Try to answer all of the questions in the test. You will be able to skip and come back to items or sections if you want to do so. It is recommended, however, that you avoid skipping around too much as you might neglect to go back and answer all skipped items.
- If you experience any computer problems, indicate so immediately in the manner in which you were instructed to do so should this situation occur.
- If there's time, check your answers. Make changes carefully. Yes, often your first response is correct, but often it's not. If you have time, go back and double check. Remember that you are not trying to second-guess yourself, just to correct any careless mistakes you may have made.
- Pace yourself using the number of items and the time limits to guide you. Be mindful of the clock.
- Use the available information in the problem to help you. Look at the table in the Table Interpretation subtest. It is there for you to use. Look at the facts in the Reasoning problems as often as you need to help you select the correct answer.
- Try to think of the answer in your head before checking the answer choices so that finding that answer choice can confirm what you thought.
- Use the answer choices to help you figure out the answer. Check the answer choices against the problem to determine if they are correct or incorrect.
- Eliminate the incorrect answer choices right away. Narrow down the possible correct answers.
- Establish a reward for yourself when the test is over. If you are entitled to lunch on the way back to the office, get dessert, too, if you want. Think about buying yourself that CD by your favorite group on the weekend after the test. Keep that reward in mind. We all deserve a nice reward sometimes.
- Remember that you can do just about anything in life you need to do, no matter how anxiety-producing and worrisome, provided you know when it is over. Your TSA will take about 50 minutes. After that time, you will have completed it.

ADDITIONAL READING

There are numerous test-preparation sites on the Internet, many offering sample test items, test-taking tips, and more. Try using an Internet search engine and looking up, for example, "free online test preparation." Some websites do charge fees for some services so be aware when you select services as to whether these services are free or not. There are many free materials available. Practicing items that are unlike those on the actual TSA may have limited value, so try to find items of the type in this workbook. If you find that there are certain problem types that you need to study more, do a more focused search online for sample tests with similar types of items.

There are also test-preparation guides for other tests, which may be relevant to some of the problem types you will encounter on the TSA. Reading these test-preparation guides and following their suggestions could help you prepare for the TSA. Well-known test preparation guides include those published by Barron's, Kaplan, Learning Express, the Princeton Review, and Research and Education in America. Many of the test-preparation guides are designed for tests such as the GED, ACT, SAT, and ASVAB. These books are available online and in many bookstores and libraries.

As indicated in the "Developmental Suggestions" at the conclusion of each module, you may find it helpful to take a course in basic skills such as math or reading comprehension, particularly if you feel or know from your performance in this workbook that your skills are weak in a certain area. Such courses may be available through a local school district, adult learning center, community college, or a self-guided study course.

Congratulations, you have completed the TSA Test Prep material in the TSA Student Workbook.

READING SKILLS INVENTORY

READING COMPREHENSION PASSAGE

DIRECTIONS for Reading Comprehension Passage

- Read the passage and answer the questions which follow it.
- You may look back to the passage to find the answers to the questions.
- There is a time limit of 20 minutes.
- All questions must be answered within the 20 minute time period.

Time Limit: 20 minutes

Read the passage and answer the questions.

Today whales have small bones which are the remains of hind legs. These bones, which can only be seen on the inside of the whale, remind us that whales once walked on four legs. Why did whales leave the land to live in the sea? Scientists cannot answer this question. However, scientists surmise that when the whales changed their environment their bodies changed also, taking on a more fish-like appearance. Without legs, the whale encountered less body resistance, and thus could swim faster.

Although whales resemble fish, they are not fish. If a whale stays under water too long, it will drown just as a man will. When a whale is under water, it closes its nostrils tightly and holds its breath. The air which is in the whales' lungs then becomes very hot and full of water vapor. After the whale rises to the surface, it exhales; its hot breath then produces a column of water vapor which rises high in the air.

Like other mammals, whales bear their young instead of laying eggs. The mother whale also produces milk for her babies. The whale has other characteristics which mammals possess. The whale is warm-blooded. The whale's body temperature stays the same when it moves from warm to cold water. Most mammals have hair on their bodies to keep them warm; the whales, too, have a few hairs. However, the whales are kept warm by a thick layer of fat, blubber, just under their skins.

Circle the letter that is the correct answer.

1. According to the passage, why do whales no longer have legs?
    a. Since whales no longer walk, their legs shrank from disuse.
    b. Whales' bodies changed so that they could swim faster.
    c. Whales wanted to look like the fish in the sea so that they could be protected from those fish.

2. In paragraph one, find the word surmise. What does the word surmise mean?
    a. to make a guess
    b. to tell a story
    c. c. to do an experiment

3. What is the main fact that the author offers to support the statement that whales are not fish?

   a. whales bear their young
   b. whales give their babies milk
   c. whales will drown if they stay under water too long

4. Which of the following is not offered as a characteristic of mammals?

   a. they have backbones
   b. they have hair on their bodies
   c. they produce milk for their young

5. In paragraph two, find the word exhale. What does the word exhale mean?

   a. to breathe in
   b. to breathe out
   c. to look around

6. In the last paragraph, find the word blubber. What is blubber?

   a. skin
   b. hair
   c. fat

7. From the passage, we might conclude that:

   a. as fish become larger, they change into mammals
   b. as animals' environments change, their bodies change to adapt to the new environment
   c. few whales drown

8. From the information in paragraph one, we can conclude that:

   a. we will never be able to explain why whales no longer have legs
   b. there is a very specific reason why fish do not have legs
   c. whales will never return to the land

9. How are whales different from most mammals?

   a. the whale's body temperature stays the same when it moves from warm to cold water
   b. the whales are kept warm by a layer of fat, rather than a layer of hair
   c. the mother whales produce milk for their young

10. From the information given we can assume that:

    a. whales will eventually develop gills
    b. blubber helps a whale to float
    c. a fish with legs would be at a disadvantage when it tried to escape

Answer Key and Skills Addressed

Score: _____ correct/10

Question	Answer	Reading Skill
1.	b	Identifying specific details
2.	a	Using context clues and making an inference
3.	c	Using the main idea and specific facts
4.	a	Drawing a conclusion using specific facts
5.	b	Context clues
6.	c	Using context clues and making an inference
7.	b	Drawing a conclusion
8.	b	Drawing a conclusion and making an inference
9.	b	Organizing facts to draw a conclusion
10.	c	Drawing an inference

Scoring for Reading Comprehension Passage

If you scored 7 or less correct on this passage, you should obtain help with improving your reading comprehension by:

- Taking an online or face-to-face reading comprehension course through your local community college or adult education center.
- Visiting sites on the Internet that deal with improving your reading comprehension.

Each of the ten items on the Reading Comprehension Passage relates to a particular reading skill. For example, problem #1 deals with "Identifying specific details." For each item you missed, be sure to:

- Focus in your online or face-to-face reading course on these particular skills.
- Do a focused search online to find additional help on this skill. For example, type in your search engine "using context clues and making an inference" or "improving reading by using context clues and making an inference."

READING SKILLS INVENTORY – LEVELS 1 AND 2

Directions

- Read the paragraph and fill in each blank by choosing a word from the word list for that paragraph. You will notice that the word list has 5 more words than you will need to complete the paragraph .
- For each choice that you make, you should choose the word that makes sense according to what you have read in the paragraph.

Level 1

Fill in the blanks.

Even though the sun is _____ 93 million miles away, its rays warm the _____. The areas that receive the _____ rays vertically are warmer than those _____ that receive only slanting rays. Vertical _____ do not need to make as _____ a journey through the atmosphere _____ reaching the surface of the _____. Therefore, less of their _____ is lost in the air and _____ of their heat is saved to _____ the earth. Furthermore, slanting rays _____ spread over a wider area than _____ rays so that less heat _____ available at a given point.

The sun's rays do not _____ the huge stretches of space _____ the sun and the earth. If _____ did, we should expect to be _____ on top of a high _____ or riding in an airplane _____ we are on the ground. Actually, we _____ cooler at the top of a _____, and if we fly an _____ high enough, we encounter freezing _____.

WORD LIST					
airplane	clouds	heat	rays	are	cool
is	sun's	are	earth	long	temperatures
approximately	earth	more	than	areas	from
mountain	they	before	hard	mountain	vertical
between	heat	only	warm	warmer	

Level 2

Fill in the blanks.

Now the same _____ of thing is happening in many _____ in Africa and Asia. Peoples _____ have never felt free to _____ their own decisions are trying to _____ free national societies. However, in _____ places, independence will be _____ more easily than in others, _____ it will take years of _____ to become free. In _____ places, _____ will never be won.

It is very difficult _____ the countries that have profited _____colonies for years and _____ to give up the flow of _____ they are accustomed to and _____ reorganize their economy along different _____. However, it is obvious that _____ to hold on to colonies can no _____ be really successful. The successes of the American _____ European revolutions are too _____ for that. All people feel that _____ have as much right _____ national existence as those _____ have enjoyed it for _____ long.

WORD LIST					
and	lines	some	too	areas	longer
something	where	efforts	make	sort	who
establish	months	strong	who	for	much
struggle	freedom	from	other	they	years
gained	profits	to	have	so	to

Answer Key

Level 1 - Answer Key Score: __ /24

Even though the sun is approximately 93 million miles away, its rays warm the earth. The areas that receive the sun's rays vertically are warmer than those areas that receive only slanting rays. Vertical rays do not need to make as long a journey through the atmosphere before reaching the surface of the earth. Therefore, less of their heat is lost in the air and more of their heat is saved to warm the earth. Furthermore, slanting rays are spread over a wider area than vertical rays so that less heat is available at a given point.

The sun's rays do not heat the huge stretches of space between the sun and the earth. If they did, we should expect to be warmer on top of a high mountain or riding in an airplane than we are on the ground. Actually, we are cooler at the top of a mountain, and if we fly an airplane high enough, we encounter freezing temperatures.

Level 2 - Answer Key Score: __ /25

Now the same sort of thing is happening in many areas in Africa and Asia. Peoples who have never felt free to make their own decisions are trying to establish free national societies. However, in some places independence will be gained more easily than in others, where it will take years of struggle to become free. In other places, freedom will never be won.

It is very difficult for the countries that have profited from colonies for years and years to give up the flow of profits they are accustomed to and to reorganize their economy along different lines. However, it is obvious that efforts to hold on to colonies can no longer be really successful. The successes of the American and European revolutions are too strong for that. All people feel that they have as much right to national existence as those who have enjoyed for it for so long.

SCORING FOR READING SKILLS INVENTORY – LEVELS 1 AND 2

On the Answer Key, fill in your number correct for Levels 1 and 2.

- If you score on Level 1 is less than 21/24 correct, complete the Reading Comprehension material in this Student Workbook but also obtain additional help with your reading by:
    - Taking an online or face-to-face reading improvement course through your local community college or adult education center.
    - Visiting sites on the Internet that deal with improving your reading.
- If your score on Level 1 is 21 or more correct, and your score on Level 2 is 20 or less correct, complete the Reading Comprehension material in this Student Workbook but also consider the suggestions above, particularly if you have had difficulty with reading in the past.
- If your score on Level 2 is more than 20 correct, complete the Reading Comprehension material in this Student Workbook. You may not need additional instructional Reading Comprehension beyond the material in this Student Workbook.

READING SKILLS INVENTORY - TIMED READING

DIRECTIONS

- Use a timer or another person to help. Set the timer for one minute or ask the person to stop you from reading after one minute.
- Begin reading the passage.
- Mark the word that you are reading when you must stop.
- Use the number in the margin to determine how many words per minute you have read.

	No. of Words
Tricks in which the magician apparently cuts people in half or makes them disappear are called illusions. The word illusion derives from the fact that mirrors are often used to perform these tricks. A famous illusion trick is to saw a woman in half. The woman is put into a long box with her head sticking out of one end, and her feet sticking out of the other end. The magician takes an ordinary wood saw and cuts the box into two halves. The audience is shocked, thinking that perhaps he has killed the woman. A few moments later, however, the magician puts his "magic" cape over the box and the woman comes out. The woman that the audience saw being cut in two was only an image in a mirror - an illusion.	
Conjuring is as popular today as it was in ancient times. Records show that over 2,000 years ago magic performances were being given in Egypt, Rome, India, China, and Greece. These early magicians only performed for small groups of people on a street corner or for a child and his friends. The magicians in those days used only small objects that they could carry with them or borrow, such as cups, pebbles, knives, and string.	**163**
Early conjurers wore large aprons with many pockets in which they could carry their props. The bag-like apron served as identification and as a place to hide things while performing. Conjurers also carried a small folding table on which to perform their tricks.	**208**
About the fifteenth century, more elaborate tricks were invented which used larger equipment, such as boxes and barrels with false bottoms. Under these false bottoms the magician could hide a bird, rabbit, plant, or whatever he wanted to make appear suddenly. From one barrel he could make several different liquids pour forth while he told the audience that he was changing the entire contents of the barrel by magic. People of that time knew very little about mechanical devices, so it was easier for the magician to deceive them.	**253** **312** **340**

SCORING TIMED READING

Number of words read per minute = _____

Reading Rates:

- Fewer than 260 words per minute = Low
- 260 - 320 words per minute = Average
- More than 320 words per minute = High

If your reading rate is low, you should:

- Take a speed reading course online or face-to-face at your local community college or adult education center.
- Visit sites that teach speed reading online.
- Visit your local library or bookstore for books on speed reading.

If your reading rate is average, consider the above developmental activities, though they are not required.

If your reading rate is high, you may not require additional support to improve your reading rate.

MATH SKILLS INVENTORY

This is not a test. It is simply a self-diagnosis of your math abilities and can be used to help plan your study program.

Section 1: WHOLE NUMBERS

1. 71,604
   + 37,283

2. 1253 + 98 + 101 + 9 =

3. 8378
   - 5164

4. 71,104 – 41,227 =

5. 1013 x 52 =

6. 9790
   X 323

7. $8\overline{)32504}$

8. 32612 ÷ 96 =

Section 2: FRACTIONS

9. 1 2/3 x 1 ¾ =

10. 1/5 of 60 =

11. 2 ÷ ¼ =

12. 42 ½ ÷ 2 ½ =

13. 15 1/7 + 8 2/3 =

14. ¼ + 2/3 + 4/5 =

15. 14 3/7 - 9 4/8 =

16. 8 - 3 2/7 =

Section 3: DECIMALS

17. .09 + .25 + .8 + .954 =

18. 7.483 + 1 ¼ =

19. 87.395 – 18.426 =

20. 25 - 20.2681 =

21. 1.7 x .15 =

22.
.0015
x .03

23. $.32\overline{)609.28}$

24. 21 ÷ .007 =

Section 4: PERCENTS

25. 1.3 = what percent

26. Write 8% as a fraction reduced to lowest terms.

27. Write 12 ½% as a decimal.

28. What is 4 ½% of 120?

29. 5% of what number is 245?

30. What percent of 15,000 is 900?

Now, check your answers with the answer key that follows. After scoring your Math Skills Inventory, complete the Math Skills Inventory Score Sheet to determine in which areas you need to focus.

MATH SKILLS INVENTORY - ANSWER KEY

Whole Numbers:

1) 108,887
2) 1,461
3) 3,214
4) 29,877
5) 52,676
6) 3,162,170
7) 4,063
8) 339.71 or 339 R 68

Fractions:

9) 2 11/12
10) 12
11) 8
12) 17
13) 23 17/21
14) 1 43/60
15) 4 13/14
16) 4 5/7

Decimals:

17) 2.094
18) 8.733
19) 68.969
20) 4.7319
21) .255
22) .000045
23) 1904
24) 3000

Percents:

25) 130%
26) 2/25
27) .125
28) 5.4
29) 4900
30) 6%

MATH SKILLS INVENTORY SCORE SHEET

Enter your number correct in the spaces indicated.

		# Correct
Whole Numbers:		
• Addition, Problems 1 and 2		_____/2
• Subtraction, Problems 3 and 4		_____/2
• Multiplication, Problems 5 and 6		_____/2
• Division, Problems 7 and 8		_____/2
	Total	_____/8
Fractions:		
• Multiplication, Problems 9 and 10		_____/2
• Division, Problems 11 and 12		_____/2
• Addition, Problems 13 and 14		_____/2
• Subtraction, Problems 15 and 16		_____/2
	Total	_____/8
Decimals:		
• Addition, Problems 17 and 18		_____/2
• Subtraction, Problems 19 and 20		_____/2
• Multiplication, Problems 21 and 22		_____/2
• Division, Problems 23 and 24		_____/2
	Total	_____/8
Percents:		
• Interchanging Fractions, Decimals and Percents, Problems 25, 26, 27		_____/3
• Solving 3 Types of Percent Problems, Problems 28, 29, 30		_____/3
	Total	_____/6
	TOTAL CORRECT	_____/30

If you solved both problems in an area correctly or all 3 correct with percents, this is an area which you appear to be proficient. In these areas, you may only need to skim the sections in Mastering Math and/or only do those problems which appear challenging. If you missed one or more problems in any group of 2 or 3 problems (such as addition of whole numbers or division of fractions), this is an area which you should study more fully in your Mastering Math text.

MATH TIMED EXERCISES #1 - #5

Complete these timed exercises after you have completed your work in Mastering Math.

For each problem, circle the letter of the correct answer. Use scrap paper to perform any calculations.

For each exercise, time yourself using the time limits indicated for each exercise. If you did not complete an exercise in the time limit given, stop and then complete the remaining problems so that you have the benefit of completing every problem.

After you complete each timed exercise, check the answer key for that exercise. Answer keys for all timed exercises appear after Timed Exercise #5.

MATH TIMED EXERCISE #1

Circle the letter of the correct answer. Use scrap paper to perform any calculations. (3 Minutes)

1. Find the sum of 2,800, 2,000, 800
   a. 5,600
   b. 5,400
   c. 4,800
   d. 8,000

2. 2/9 of 81 =
   a. 162
   b. 91
   c. 18
   d. 364 ½

3. 4 3/7 x 10 =
   a. 40 3/7
   b. 44 2/7
   c. 44 2/3
   d. 440 3/7

4. 165 - 2.365 =
   a. 165.235
   b. 165.635
   c. 162.235
   d. 162.635

5. 64.39 x 1.046 =
   a. 64.3964
   b. 65.436
   c. 67.35194
   d. 68.35194

6. .3% of 9.2 =
   a. 0.276
   b. 2.76
   c. 27.6
   d. .0276

7. 16 is what % of 96?
   a. 16 2/3%
   b. 17%
   c. 1/6%
   d. 16%

8. 19 - ½ =
   a. 19 ½
   b. 19
   c. 18 ½
   d. 38

9. 4,234 - 3,743 =
   a. 491
   b. 591
   c. 691
   d. 791

10. 4 ÷ 5 =
    a. .8
    b. .08
    c. 8.0
    d. 1.2

MATH TIMED EXERCISE #2

Circle the letter of the correct answer. Use scrap paper to perform any calculations. (3 Minutes)

1. 60% of what number is 360?
   a. 219.60
   b. 1/6
   c. 600
   d. 16 2/3%

2. 11 x 10,000 =
   a. 11,000
   b. 111,000
   c. 110,000
   d. 1,100,000

3. 6/11 x 11/26 =
   a. 3/13
   b. 13/3
   c. 6/26
   d. 66/26

4. 642.5 ÷ .025
   a. 2,570.5
   b. 25,700
   c. 2,575
   d. 25,705

5. 33 1/3% of 33 =
   a. 99 1/3
   b. 33
   c. 99
   d. 11

6. 2 4/9 + 3 1/3 + ½
   a. 4 29/54
   b. 5 6/14
   c. 6 5/18
   d. 6 17/84

7. 301 x 804 =
   a. 242,004
   b. 242,404
   c. 242,444
   d. 240,404

8. 5,798 ÷ 52 =
   a. 111 R 2
   b. 111 ½
   c. 111 R 26/54
   d. 111 R 27

9. 195,804 - 188,908 =
   a. 7,896
   b. 6,896
   c. 6,892
   d. 7,986

10. 76% of 50 =
    a. 2/3
    b. 3.8
    c. 38.8
    d. 38

MATH TIMED EXERCISE #3

Circle the letter of the correct answer. Use scrap paper to perform any calculations. (3 Minutes)

1. 47 + 47+ 4/5
   a. 94 4/5
   b. 95 1/5
   c. 94
   d. 95

2. 175 x 1000 =
   a. 17,500
   b. 1,750
   c. 175,000
   d. 1,750,000

3. 3/7 x 1 3/7 =
   a. 1 19/30
   b. 30/49
   c. 1 9/17
   d. 21/70

4. 18 + 9 15/17 =
   a. 28 2/17
   b. 27 15/17
   c. 28 15/17
   d. 27 2/17

5. 4 5/6 x 6/29 =
   a. 4 11/35
   b. 0
   c. 1 6/29
   d. 1

6. 1% of 575 =
   a. .575
   b. .0575
   c. 57.5
   d. 5.75

7. 16 - 1 3/8 =
   a. 15 3/8
   b. 16 3/8
   c. 14 5/8
   d. 15 5/8

8. 3/5% =
   a. 60%
   b. 6%
   c. .006
   d. .060

9. 12 ÷ 1.00 =
   a. .0012
   b. .012
   c. .12
   d. 12

10. .023 x .003 =
    a. .000069
    b. .00069
    c. .0069
    d. .069

MATH TIMED EXERCISE #4

Circle the letter of the correct answer. Use scrap paper to perform any calculations. (4 Minutes)

1. 36,000 - 396 =
   a. 36,396
   b. 36,604
   c. 35,604
   d. 34,604

2. 5005 x 505 =
   a. 2,527,525
   b. 2,527,625
   c. 252,765
   d. 275,575

3. 804804 ÷ 201 =
   a. 4,004
   b. 40,004
   c. 400,004
   d. 40,040

4. 17.5 x .004 =
   a. .3700
   b. .00700
   c. .007
   d. .07

5. 2 ½ + 4 2/3 + 2 3/16 =
   a. 8 15/48
   b. 8 17/48
   c. 9 17/48
   d. 9 48/65

6. 187 - 3 9/14 =
   a. 183 5/14
   b. 184 9/14
   c. 184 5/14
   d. 183 9/14

7. 18 ½ - 6 9/11 =
   a. 10 7/11
   b. 9 4/11
   c. 10 15/22
   d. 11 15/22

8. 1/3 x 2 1/3 =
   a. 2 1/9
   b. 1/7
   c. 2 2/3
   d. 7/9

9. 14 ÷ 2/5 =
   a. 35
   b. 5 3/5
   c. 1/35
   d. 14 2/5

10. 10% of 5 =
    a. .05
    b. .5
    c. .55
    d. .005

MATH TIMED EXERCISE #5

Circle the letter of the correct answer. Use scrap paper to perform any calculations. (4 Minutes)

1. 5 + 55 + 555 =
   a. 565
   b. 5555
   c. 615
   d. 665

2. 15,347 - 2,469 =
   a. 13,879
   b. 13,878
   c. 12,879
   d. 12,878

3. .47 + 4.7 =
   a. 4.17
   b. 4.747
   c. 5.17
   d. 5.27

4. 103 x .0013
   a. .00169
   b. .0169
   c. .1339
   d. .00139

5. 10 ÷ .001 =
   a. 1,000
   b. 10,000
   c. 100
   d. 10,001

6. 15% of what number is 225?
   a. 1,500
   b. 150
   c. 15,000
   d. 33.75

7. ½ + 7/9 + 12 =
   a. 1 5/18
   b. 13 7/18
   c. 12 5/18
   d. 13 5/18

8. .08 =
   a. 2/25
   b. 4/5
   c. 8/1000
   d. 4/50

9. 4/5 + 1.7 =
   a. 1 ½
   b. 2 ½
   c. 2 1/10
   d. 2 1/5

10. 16% of 16 =
    a. 2.56
    b. 2.36
    c. 25.6
    d. .256

ANSWER KEYS - TIMED EXERCISES #1 - #5

Timed Exercise #1

1.	a	6.	d
2.	c	7.	a
3.	b	8.	c
4.	d	9.	a
5.	c	10.	a

Timed Exercise #2

1.	c	6.	c
2.	c	7.	a
3.	a	8.	b
4.	b	9.	b
5.	d	10.	d

Timed Exercise #3

1.	a	6.	d
2.	c	7.	c
3.	b	8.	c
4.	b	9.	d
5.	d	10.	a

Timed Exercise #4

1.	c	6.	a
2.	a	7.	d
3.	a	8.	d
4.	d	9.	a
5.	c	10.	b

Timed Exercise #5

1.	c	6.	a
2.	d	7.	d
3.	c	8.	a
4.	c	9.	b
5.	b	10.	a