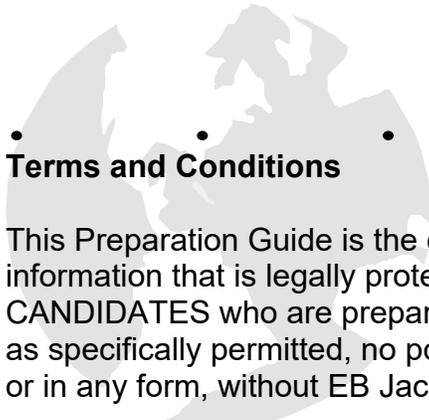


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Delaware State Police

Entry-Level Trooper Examination

Candidate Preparation Guide



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TABLE OF CONTENTS

INTRODUCTION	1
PART I: LAW ENFORCEMENT APTITUDE BATTERY (LEAB)	2
SECTION I: GENERAL INFORMATION	2
SECTION II: TEST COMPONENT DESCRIPTIONS	4
A. Ability Test	4
B. Work Styles Questionnaire	5
C. Life Experience Survey	6
SECTION III: PROCEDURES FOR RECORDING RESPONSES.....	7
SECTION IV: ABILITY TEST PREPARATION STRATEGIES	9
A. General Test Information	9
1. Objectives	9
2. General Multiple-Choice Test-Taking Strategies	10
3. Error Analysis.....	12
B. Ability Areas	15
1. Written Expression.....	16
2. Written Comprehension	19
3. Problem Sensitivity	21
4. Deductive Reasoning.....	25
5. Inductive Reasoning	30
6. Information Ordering	33
C. Sample Test Questions: Answers and Explanations	37
PART II: PHYSICAL TEST (PT)	40
SECTION I: SUMMARY OF PT	40
A. General Description.....	40
B. DSP Entry-Level Trooper PT	40
SECTION II: PREPARING TO BEGIN A FITNESS PROGRAM	42
A. Medical and General Health Factors.....	42
B. Principles of Training.....	50
C. Assessing Your Current Level of Fitness	53

SECTION III: FITNESS PROGRAM	56
A. General Directions for Fitness Program	56
B. Warm-Up	57
C. Calisthenics	63
D. Weight Training	66
E. Aerobic Training Program	74
F. Cool-Down	75
SECTION IV: WEEKLY LOG PAGES	76
A. Weekly Log: Calisthenics and Aerobic Exercises	76
B. Weekly Log: Weight Training and Aerobic Exercises	77
SECTION V: REFERENCES USED IN THE PT SECTION OF THIS GUIDE	78
FINAL WORDS	79

INTRODUCTION

This Candidate Preparation Guide has been distributed to help you prepare for the Delaware State Police (DSP) Entry-Level Trooper Examination. We are providing this information in recognition of the fact that a considerable amount of the anxiety associated with participation in examinations is related to the novelty of the procedures that candidates encounter. This guide covers the Law Enforcement Aptitude Battery (LEAB), and the DSP Physical Test. **A separate guide will be made available to address the Oral Interview.**

The Entry-Level Trooper Examination is being administered in two phases. As part of Phase I, candidates will be asked to participate in the LEAB. The top performing candidates on the LEAB will be invited to participate in Phase II. Phase II will consist of the Oral Interview. The Physical Test may be administered during either phase of the examination. Each test component is described in more detail below.

The **LEAB** consists of the following three test components: the Ability Test, the Work Styles Questionnaire, and the Life Experience Survey. The Ability Test is designed to test a series of abilities, such as Written Comprehension, Problem Sensitivity and Reasoning, determined to be important to the effective performance of entry-level law enforcement officers. The Work Styles Questionnaire is designed to assess certain motivational, value-related and attitudinal characteristics that are of potential relevance to the successful performance of entry-level law enforcement officers. The Life Experience Survey consists of a series of multiple-choice questions related to candidates' past history and experience of potential relevance to the successful performance of entry-level law enforcement officers. All three LEAB test components will be scored and your scores from all three components will be combined to determine your continued eligibility in the selection process.

The **Physical Test** is designed to assess a candidate's capacity to perform the tasks ordinarily performed by a trooper while on the job. This is accomplished by requiring candidates to perform activities which evaluate the body's physiological systems known to underlie the effective performance of a DSP Trooper.

The **Oral Interview** is designed to assess abilities and personal characteristics underlying effective trooper performance in the DSP. You will be presented with two exercises designed to allow for the assessment of a series of abilities and personal characteristics identified, through the job analysis, as critical to the job performance of a DSP Trooper. These situations will NOT require technical knowledge of law enforcement, since the technical aspects of the job are learned in training.

Please note that the order in which the test components are described in this guide may not reflect the same order that they will be administered. From the information presented in this guide, you will get a good understanding of the administrative procedures, the types of simulations or questions that you will encounter on each test, and the systematic methods of study and preparation which you should use in preparing for each test.

This Preparation Guide is organized into the following parts:

Part I: The **LEAB** description includes an overview of the administrative procedures as well as sample questions. This section includes examples of the kinds of questions that will be included on each section of the LEAB. This section also includes general test-taking strategies as well as strategies to be used in answering each ability being assessed on the Ability Test portion of the LEAB.

Part II: This part provides an overview of the physical abilities critical to the performance of the trooper's job to be assessed during the **Physical Test** along with suggested preparation strategies. The preparation strategies include descriptions and illustrations of exercises that can be performed in advance of the Physical Test to develop the physical abilities involved in the tasks performed by troopers.

You are encouraged to review this Guide as many times as necessary to become comfortable with the information and preparation strategies presented.

PART I: LAW ENFORCEMENT APTITUDE BATTERY (LEAB)

SECTION I: GENERAL INFORMATION

When participating in the LEAB, follow these general guidelines:

1. **Read all of the directions carefully and pay careful attention to any additional instructions provided by administrators.** Specific instructions will be provided for each test component. It is very important that you read these specific instructions carefully before starting each test component to ensure that you understand the procedures that need to be followed.
2. **Know how much time you have to take the LEAB and how much time you should spend on each of the three components of the LEAB.** You will have at least 2 hours and 15 minutes to take all three components of the LEAB and read the test instructions. The three sections of the LEAB will not be timed separately. The amount of time that you should allot to each component will be recommended in the instructions you receive at the test site. As a general guideline, it should take approximately 15 minutes to read all of the instructions appearing throughout the test booklet. You should plan on spending the majority of the remaining time (e.g., at least 1 hour and 30 minutes) on the Ability Test, about 15 minutes on the Work Styles Questionnaire, and about 15 minutes on the Life Experience Survey. Please note that these are suggested times to ensure that you are able to finish all three sections of the LEAB in the allotted time. You can divide the total available time among the three LEAB components as you wish. You may wear a watch to keep track of the time during the LEAB administration.

When you appear at the test site to take the LEAB, you will receive specific information about the total time allotted to take the full test battery and the suggested amount of time for each of the three individual test components.

3. **Make sure you know how to correctly record your responses.** Section III of this Guide explains the procedures to be followed for recording your responses. You should also pay careful attention to the specific instructions that will be provided when you are taking the LEAB. Be careful to record your responses carefully as you work through the LEAB to avoid losing credit due to response entry errors.
4. **Test Administrators will be available to help you.** If you have any questions about the testing procedures, ask for assistance or clarification before the LEAB administration begins. However, keep in mind that administrators will not explain the meaning of any question, define words, or give, in any manner, information which may be of help in answering a question.
5. **Take a mental break if and when needed.** If you feel that your ability to concentrate is decreasing at any point while you are taking the LEAB, take a brief mental break. Take a minute to clear your mind and relax. Of course, you must keep in mind the time limit for the LEAB, but a brief mental break may well be worth the time it takes.
6. **Answer every question on each of the three test components.** Do not leave any questions blank.
 - a. When completing the Ability Test, the outcome is the same whether you respond incorrectly to a question or do not respond at all (i.e., you receive no credit for your response). When you respond at least you have the opportunity, even if by chance, to answer the question correctly. It is therefore to your advantage and in your best interest to respond to all Ability Test questions even if you are not sure of the correct answer to a question.
 - b. When completing the Work Styles Questionnaire and Life Experience Survey, if you are unsure of how to respond, choose the alternative that most accurately describes your past experiences, behavior or how you feel. Candidates who do not respond to all questions on the Work Styles Questionnaire and Life Experience Survey may be disqualified from the selection process.

7. **Use extra time wisely to review your responses to the Ability Test.** If you complete the Ability Test well before the suggested time period has expired, it may be wise to review your responses to the Ability Test (particularly questions to which you were unsure of the correct answer) prior to moving on to the other two test components of the LEAB. However, once the suggested time period is up, or soon thereafter, you should move on to the remaining test components to ensure that you have enough time to complete them.

8. **Respond honestly when taking test components that ask you to describe your past experiences, behavior, or feelings.** This guideline applies to the Work Styles Questionnaire and Life Experience Survey. It is very important that you respond honestly as you take each of these test components. It is possible that other individuals may suggest that you respond in certain ways to increase your chances of being hired, even if those responses do not accurately or honestly reflect your experience or feelings. There are two important reasons why you should respond honestly despite these kinds of suggestions. First, each of these two components contains internal mechanisms that make it possible to identify candidates who are not responding honestly. If the pattern of your responses suggests that you are not responding honestly, you may be disqualified from the selection process. Second, law enforcement agencies conduct their own background investigations and other similar procedures on each candidate. During these procedures, agencies will obtain specific information related to some of the questions asked in the Work Styles Questionnaire and Life Experience Survey. If law enforcement agencies obtain information during their internal investigations that is inconsistent with the responses you provided during the LEAB, the agency may disqualify you from the selection process.

SECTION II: TEST COMPONENT DESCRIPTIONS

A. Ability Test

The Ability Test is designed to test a series of abilities, such as Written Comprehension, Problem Sensitivity and Reasoning, determined to be important to the effective performance of entry-level law enforcement officers. The Ability Test contains 48 questions. Each question will be followed by four alternatives (A through D). For each question, candidates will be asked to identify the single best answer and record the response chosen (see examples below in the boxed area).

You should plan on spending the majority of the total LEAB assessment time (e.g., at least 1 hour and 30 minutes) to complete the Ability Test. You should provide a response for every question. Questions that are left unanswered will be scored as incorrect. Therefore, even if you are not at all sure of the correct answer to a question, it is in your best interest to record a response rather than to leave the question blank.

SECTION IV of this Guide provides a comprehensive set of strategies to prepare you to take the Ability Test. We encourage you to carefully review and practice these strategies before taking the LEAB.

The following example is presented ONLY for illustrative purposes and does not actually appear on the Ability Test portion of the LEAB. This example closely represents the kinds of questions that will be included on the Ability Test. Please note that the example is preceded by a passage. Although there is only one question associated with this passage, during the Ability Test you may be presented with passages of information that apply to more than one question.

Example

Use the information in the following passage to answer question 1.

Officer Thompson has noticed that in his patrol area, most of the assaults occur in the eastern and northern sections, while most automobile thefts occur in the southern and western sections and most traffic accidents occur in the western section.

The majority of automobile thefts take place between 3 a.m. and 7 a.m. Most of the traffic accidents occur either between 7 a.m. and 9 a.m. or between 5 p.m. and 8 p.m. Most of the assaults occur between 7 p.m. and 9 p.m. or between 11 p.m. and 4 a.m.

In addition, the traffic accidents almost always occur on Mondays and Fridays, the assaults take place on any day from Wednesday through Saturday, and automobile thefts typically take place on weekday mornings.

1. According to the preceding passage, Officer Thompson most likely would be able to reduce the number of assaults by patrolling the:
 - A. eastern section between 5 a.m. and 1 p.m.
 - B. eastern section between 11 a.m. and 5 p.m.
 - C. western section between 10 p.m. and 6 a.m.
 - D. northern section between 8 p.m. and 1 a.m.

B. Work Styles Questionnaire

This component is an important part of the LEAB. In addition to the cognitive and physical ability requirements placed upon law enforcement officers, certain personal characteristics are also important to effective performance. The Work Styles Questionnaire will be used to assess these important characteristics.

You should use approximately 15 minutes of the total LEAB assessment time to complete the Work Styles Questionnaire. No preparation is necessary (or expected) for this component of the LEAB. However, the Work Styles Questionnaire will be scored and your score will be combined with your scores on the Life Experience Survey and Ability Test to determine your continued eligibility in the selection process. Examples have been presented in the boxed area below so that you will know what to expect during the Work Styles Questionnaire.

The Work Styles Questionnaire contains a series of 74 short statements. You will read each statement (see examples below) and then decide the degree to which you agree or disagree with each statement as it applies to you by selecting a rating from 1 to 5 using the rating scale presented in the boxed area below.

In this questionnaire, you will be instructed to:

- Rate yourself on a scale from 1 to 5 (see scale below) on a number of phrases or statements and record the rating you choose.
- Choose “Unsure” ONLY when you are truly not sure how to rate yourself.
- Work quickly through the questionnaire, provide honest responses, and avoid spending too much time thinking about how to respond to any single statement.
- Respond to every statement, even if no single point on the rating scale describes you or the way you feel perfectly, since candidates who do not respond to all statements on the Work Styles Questionnaire may be disqualified from the selection process.

Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
①	②	③	④	⑤

The following examples are presented ONLY for illustrative purposes and do not actually appear on the Work Styles Questionnaire portion of the LEAB. These examples are closely representative of the kinds of statements that will be included on the Work Styles Questionnaire.

1. I set goals and strive to achieve them.
2. I prefer to work alone.
3. I take time to think about why people do things.
4. I find myself taking control in group situations.
5. I find that it is not necessary to have all of the facts before making a decision.
6. Insults don't bother me.

C. Life Experience Survey

The Life Experience Survey is designed to assess characteristics related to each candidate's past history and experience. In this survey you will be presented with 47 questions that pertain to you and your personal experiences, and will cover many different topics. Each question will be followed by five response alternatives (A through E). For each question you will be asked to select one of the five response alternatives that best describes your past experience and to record the response you choose (see the examples in the boxed area below).

You will be instructed to work at a steady pace through this survey, provide honest responses and avoid spending too much time thinking about how to respond to any single question. You will also be instructed to answer every question by selecting the response that best fits you and your personal experiences, even if no single response perfectly describes you or your personal experiences. You should respond to every question since candidates who do not respond to all questions on the Life Experience Survey may be disqualified from the selection process.

You should use approximately 15 minutes of the total LEAB assessment time to complete the Life Experience Survey. Although no extended preparation is necessary (or expected) for this component of the LEAB, **we strongly recommend that you review your previous school and/or work-related documents (e.g., school transcripts, resume, evaluations from previous supervisors and/or instructors) to ensure that you are able to answer the Life Experience Survey questions regarding your past experiences as accurately as possible.** The Life Experience Survey will be scored and your score will be combined with your scores on the Work Styles Questionnaire and Ability Test to determine your continued eligibility in the selection process.

Examples are presented below so that you will know what to expect during the administration of the Life Experience Survey. These examples are presented ONLY for illustrative purposes and do not actually appear on the survey but they closely represent the types of questions that you will see when you take this portion of the LEAB.

1. Your previous supervisor would describe you as someone who usually does:
 - A. more than your fair share of the work that must be done.
 - B. more work than most of your coworkers.
 - C. about as much work as most of your coworkers.
 - D. almost as much work as most of your coworkers.
 - E. less work than most of your coworkers.

2. Within the past two years, how many times have you taken a day off because you did not feel like going to work?
 - A. never.
 - B. once.
 - C. twice.
 - D. three times.
 - E. more than three times.

3. Since completing your high school education, how many days a month do you take part in some form of community-based activity (e.g., community service, athletics, clubs, drama, etc.) outside of work or school?
 - A. 0.
 - B. 1 - 2.
 - C. 3 - 5.
 - D. 6 - 8.
 - E. 9 or more.

SECTION III: PROCEDURES FOR RECORDING RESPONSES

Instructions for Recording Responses on the LEAB Answer Sheet

During the LEAB you will receive an examination booklet and an answer sheet. You may use your booklet for scratch work or to apply the Ability Test strategies described in the next part of this Guide (e.g., underlining key words that are identified). Although you may write in your booklet, **your score will be based only on the answers that appear on your answer sheet** so you should pay very careful attention to the instructions for recording responses on your answer sheet that are presented in this Guide and during the LEAB administration.

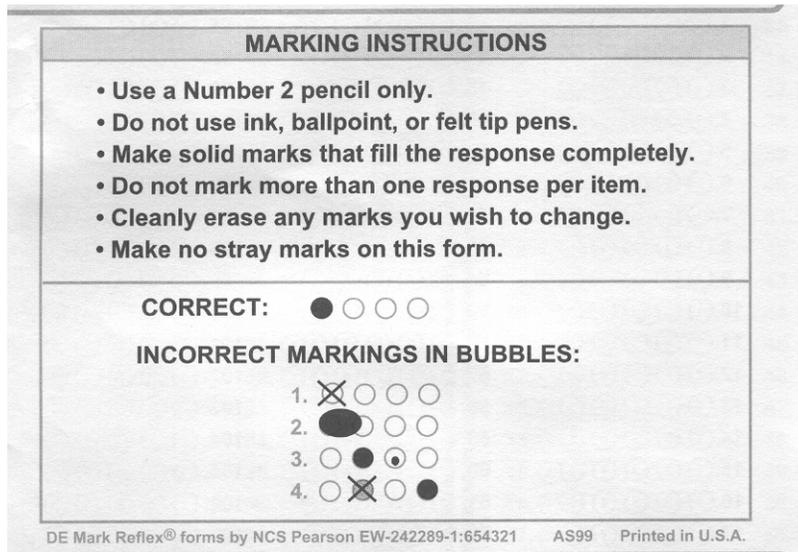
All of the questions on the three components of the LEAB will be multiple-choice. You will receive one answer sheet to record your responses to all three components. Your responses for each component will be recorded in a separate section of the answer sheet. Samples of each section of the answer sheet are presented on the next page. You will indicate your response selection by darkening the circle corresponding to your choice.

There are a few points we urge you to keep in mind when marking your responses on the answer sheet during the LEAB:

1. Be sure to record all of your responses on the answer sheet. Do not make any other stray marks or notes on the answer sheet.
2. Be sure to use only a No. 2 pencil when you record your responses on the answer sheet, because the answer sheet is scannable and only marks made by a No. 2 pencil will be detected when scored. In other words, you will only receive credit for those responses that you record with a No. 2 pencil.
3. Be sure to record a response to every question or statement. If you don't respond to all Ability Test questions, your score will likely be lower. Additionally, if you do not respond to all Work Styles Questionnaire statements and all Life Experience Survey questions you may be disqualified from the selection process.
4. Be sure that the number of the question you are working on in the examination booklet matches the number of the question you are marking on the answer sheet. That is, if you are on question 12 in the examination booklet, be sure that you are marking question 12 on the answer sheet.
5. Be sure to make pencil marks that are dark and neat when marking a response bubble. Pencil marks that are too light may not be detected when scored, so make sure that your pencil marks are dark. Pencil marks that overlap with another response bubble may be counted as a second response and the item will be scored as incorrect.
6. Be sure to clean all erasure marks on the scan sheet since dark smudges within any of the response bubbles may be scored as a response. DO NOT put an "X" over an erasure to indicate the answer is incorrect and that you have changed your selection since the "X" and your new selection will be counted as two responses and the item will be scored as incorrect.
7. Be sure to ask a Test Administrator at the LEAB administration site if you have questions about the correct way to record your responses.

Practice the above procedures by using the samples of each section of the answer sheet on page 8 to record your responses to the sample questions for each LEAB component starting on page 4 of this Guide. You can get additional practice by using the Sample Answer Sheet presented in Section IV on page 15 to record your answers to the 12 Ability Area sample questions.

Immediately below are instructions and sample portions of the answer sheet that you will use during the LEAB to record your responses. Feel free to practice filling in your responses to the sample questions included in the boxed areas on the preceding pages using a pencil and following the “marking instructions” below.



Ability Test

Work Styles Questionnaire

Life Experience Survey

1. (A) (B) (C) (D)
2. (A) (B) (C) (D)

1. (1) (2) (3) (4) (5)
2. (1) (2) (3) (4) (5)
3. (1) (2) (3) (4) (5)
4. (1) (2) (3) (4) (5)
5. (1) (2) (3) (4) (5)
6. (1) (2) (3) (4) (5)

1. (A) (B) (C) (D) (E)
2. (A) (B) (C) (D) (E)
3. (A) (B) (C) (D) (E)

Note: The answer sheet you will receive to record your responses to the LEAB will be divided into three sections. Each section of the answer sheet will correspond to one of the three LEAB components. You will use the first section labeled “WRITTEN ABILITY TEST” to record your responses to the Ability Test questions numbered 1 to 48. You will use the second section labeled “WORK STYLES QUESTIONNAIRE” to record your responses to the Work Styles Questionnaire statements numbered 1 to 74. Finally, you will use the third section labeled “LIFE EXPERIENCE SURVEY” to record your responses to the Life Experience Survey questions numbered 1 to 47. These instructions for completing your answer sheet will be repeated at the test administration.

SECTION IV: ABILITY TEST PREPARATION STRATEGIES

A. General Test Information

1. Objectives

To Familiarize You with the Ability Areas Covered on the Ability Test

The ability areas that will be assessed on the Ability Test include Written Expression, Written Comprehension, Problem Sensitivity, Deductive Reasoning, Inductive Reasoning and Information Ordering. This Guide will provide you with definitions of these ability areas and examples of how they apply to the job of an entry-level law enforcement officer.

To Provide You with Test-Taking Strategies for Each of the Ability Areas

This part of the Guide contains strategies to help you answer questions that test each of the ability areas.

To Provide You with Some General Test-Taking Strategies

This Guide suggests general strategies for taking multiple-choice ability tests, including identifying key words in questions and answering questions that you perceive as easier first.

To Familiarize You with the Procedures and Materials You Will Encounter During the Ability Test

This part of the Guide includes information about the procedures to be followed during the Ability Test. The sample questions provided in the Ability Areas section will give you a good idea of the kinds of questions to expect. Answering the sample questions will allow you to assess your own ability and identify those ability areas where you should focus your preparation efforts. Giving you this first-hand experience with the test-taking situation should help you feel more confident and comfortable when you take the actual test.

Finally, these materials will show you that all information necessary to answer the questions is contained within the test itself. This test is designed to assess abilities, not specific knowledge about law enforcement. Any law enforcement terms or procedures that are included in the test will be defined or described so that all candidates have the same information on which to base their answers. Keep in mind that any policies and procedures described in the test are not intended to match the policies and procedures of any specific department for which you may be seeking employment. Be sure to base your responses solely on the information presented for each question.

To Provide You with Information about Common Test-Taking Errors and Strategies for Avoiding Them

This part of the Guide explains errors typically made in multiple-choice ability tests and includes steps for analyzing your own errors and strategies for avoiding the same errors in the future.

This Guide contains a great deal of information. The last thing we want to do is to overwhelm you with too many strategies to think about for each type of question on the Ability Test. In order to avoid this, there are several points that you should keep in mind:

1. The more familiar you become with the strategies suggested in this Guide, the more automatic they will become. **REPETITION** and **PRACTICE** are the keys. The more often you review this Guide, the better prepared you will be.
2. Many of the strategies suggested for each of the ability areas apply only to questions testing those areas. For example, you'll see that the suggestions for dealing with Deductive Reasoning questions apply only to those types of questions. By becoming very familiar with the ability areas, you will be able to quickly and easily decide which strategies to apply to each type of question.

3. Some of the general test-taking techniques that are relevant to all questions are particularly useful when you cannot answer a question easily. If you are 100% sure of an answer, you should simply select the correct answer. However, there are some strategies, such as identifying key words and phrases, which do not take much time and are useful for questions testing almost all ability areas.

2. General Multiple-Choice Test-Taking Strategies

When completing the Ability Test, follow these general guidelines:

Make sure you understand the question.

1. Read each question carefully. Try to answer the question before you look at the choices. If you know the answer, compare it to the available choices and pick the closest alternative.
2. Break the test questions down in a way that makes them easier to read. Specifically:
 - a. Break down sentences into small segments. This will make you more attentive to separate ideas in a long sentence. Note the following example.

Example:

Before Test administrators will be available to help every candidate with testing procedures; however, administrators will not explain the meaning of any question, define words, or give, in any manner, information that may be of help in answering a question.

Below, slash marks are used to indicate how you can break up complex sentences. Note the statement just made.

After Test administrators \ will be available to help every candidate with testing procedures; \ however, administrators will not explain the meaning of any question, \ define words, \ or give, in any manner, information that may be of help in answering a question.

See how breaking the sentence down makes it easier to understand what the sentence is about by focusing your attention on the separate ideas presented.

- b. Identify key words that tell you what a sentence or passage is about. If you skip the question and come back to it later, identifying key words may make it easier to remember what the question was about, without reading the full question or passage again. Note the example below that illustrates how to identify key words.

Example:

Before Test administrators will be available to help every candidate with testing procedures; however, administrators will not explain the meaning of any question, define words, or give, in any manner, information that may be of help in answering a question.

Identify key words. Note the key words underlined in the statement just made.

After Test administrators will be available to help every candidate with testing procedures; however, administrators will not explain the meaning of any question, define words, or give, in any manner, information that may be of help in answering a question.

See how this helps you focus on the important parts of the sentence. This is particularly helpful when you are looking back and forth between two pieces of information (such as a test question and the answers to the question).

- c. Find words that "harden" or "soften" statements. Note the double-underlined words below.
1. Words such as all, never, none and every harden a sentence by indicating that there are no exceptions. As a rule, alternatives with these words have less chance of being correct.
 2. Words such as sometimes, may, generally and possibly soften a statement and leave more room for the alternative to be correct.
 3. AND means that one element of the alternative must be present or true, in addition to another element for the alternative to be correct.
 4. OR means there is a choice of situations. Only one of the elements of the alternative must be present or true for the alternative to be correct.

Proceed through the questions strategically.

1. Answer questions that you perceive as easier first.

When you go through each question on the Ability Test, answer the questions you feel are easier first and leave the ones you feel are more difficult until after you've answered all of the questions you feel are easier. This will prevent you from spending too much time on any one question and ensure that you have time to respond to, and receive credit for, every question that you can answer correctly. If you are unsure of an answer, you can skip the question. Or, you can record the answer that is most likely correct, but return to it later. Don't be afraid to change this answer if, when you return to it, you realize you have misunderstood the question. If, after returning to and thinking about the question in more depth, you are still unsure of the answer, select your first answer.

2. Use the process of elimination.

If you don't know the answer to a question, first eliminate those choices that are clearly wrong. This will save you time by reducing the number of answers you have to re-read and re-evaluate before making your final choice, particularly if you skip the question and come back to it later.

3. Tackle difficult questions methodically.

Don't get bogged down if there is a word or sentence you do not understand. You may get the main idea without knowing a specific word or understanding a specific sentence.

4. Take a mental break when needed.

If you feel that your ability to concentrate is decreasing at any point during the testing period, take a brief mental break. Take a minute to clear your mind and relax. Of course, you must keep in mind the overall time limit for the LEAB, but a brief mental break may well be worth the time it takes.

5. Answer every question.

You will not lose any more credit for an incorrect response than you will for no response, so even if you are not sure of the correct answer to a question, record a response. Although your response may not be correct, the alternative is to leave this question blank and be assured of getting it wrong.

Use extra time wisely.

If you have extra time, go back and review your responses. Make any changes that you feel are necessary. Also, make sure that you have recorded your responses correctly.

3. Error Analysis

Strategies for Analyzing and Avoiding Errors

Each one of us has weak areas in our test-taking behavior. It is to your advantage to identify those weak areas before participating in the LEAB. The sample questions contained in the Ability Areas section within this Guide are very similar to the questions that will appear on the Ability Test. After answering these questions and checking them against the answers and explanations, you should complete the Error Analysis Form contained later in this section of the Guide. After completing the Error Analysis Form, focus on the questions you answered incorrectly. This will allow you to identify any major weak areas in your test-taking behavior. **This is called Error Analysis.**

There are several possible reasons for choosing an incorrect response. Seven of these reasons are presented below, along with suggestions for avoiding such errors. Once you've identified the reason for choosing an incorrect response, it will be easier to correct it, in turn making it easier to answer that type of question correctly in the future.

Reasons for Choosing Incorrect Responses

1. Errors made when recording responses/guessing errors.

Since there are a limited number of questions on the Ability Test, errors related to the improper recording of responses are costly. Check as you record each answer choice to ensure you are recording the answer you have chosen. As an additional check, if you have extra time, go back and double check your work.

You may miss questions because you failed to provide an answer or were forced to quickly record an answer. If either of these things happened, consider why. Possible reasons and suggestions include:

- a. You may have missed a question because you skipped it and failed to return to it later. Be sure to return to skipped questions.
- b. You may have lost track of time. Be sure to check a timing device every so often so that you have time to complete all three LEAB components.
- c. You may have been forced to quickly choose an answer because you spent too much time working on difficult questions, rather than skipping them and saving them for later. Or, if you did skip difficult questions, you may have failed to identify the various alternatives as not correct; possibly correct; and most likely correct. Thus, you did not reduce the number of alternatives you had to reconsider when you re-read the questions. Be sure that you evaluate any alternatives that you do review in order to save some time re-reading and re-evaluating.

2. Misreading a question or answer by overlooking a key word or phrase.

The solution to this problem is identifying key words. Once you have identified the key words and phrases in a question, check the details of the possible answers with the details you identified, one-by-one. If every detail doesn't match, consider that answer suspect and try another, always keeping in mind you're looking for the best possible answer.

3. Not knowing the meaning of one or more key terms.

This is a vocabulary problem. When you come to an unfamiliar word, reread the sentence to determine its meaning without worrying about the meaning of the unfamiliar word. Try to understand the general message of the sentence or paragraph. The meaning of the unfamiliar word should become clearer once you understand the phrases and ideas that surround it.

4. Having difficulty distinguishing between the important and unimportant parts of a question because it is complicated or difficult to understand.

These may be the types of questions you should skip until later. When you do go back to these difficult questions, first read the possible answers before reading the question. This tells you what to concentrate on while reading the question. Also, focus on the topic sentences, which are usually the first and last sentences in a question. Read these difficult questions twice. The first time, read for the general idea. Do not get stuck on individual words or phrases you do not understand. The second time, read for a more detailed understanding. The first reading will give you the general meaning, so that the second reading will be easier. Finally, picture in your mind what the question is asking.

5. Not being familiar with comparing combinations of information.

This is a problem of re-arranging information in the correct way to make it easier to understand. Identify important pieces of information in the question and then compare this information with the possible answers point-by-point. Also, concentrate on eliminating the wrong answers first.

6. Choosing an answer simply because it "looks" good.

Several factors may cause you to select incorrect answers that "look" good:

- a. An incorrect answer may contain an exact phrase from the original question.
- b. An incorrect answer may contain a phrase or sentence from the original question, but be presented in a different way. For example, an idea that is rejected in the question may be presented in the answer as an idea that was supported.
- c. An incorrect answer may overstate what the question has stated. For example, if the question says, "Some incidents...", the incorrect answer may say, "All incidents..."

Strategies to avoid the tendency to select incorrect answers that "look" good include:

- a. Have an answer in mind before you look over the alternatives. This will make you less likely to choose an answer that just "looks" good.
- b. Beware of choosing answers based on common sense or previous knowledge and experience. Answer only on the basis of the material presented in the test question.
- c. Stick strictly to the facts or rules described in the test question. Don't select answers that stretch or exaggerate these facts or rules. Identify words such as only, never, always, whenever, all, etc. to help you pay close attention to words that "harden" or "soften" answers.
- d. Beware of answers containing exact words or phrases from the test question. Don't simply assume that such answers are correct.
- e. Prepare a defense for your answer. Find something in the test question that will allow you to give a strong defense for your answer.

7. You may not know why you answered a question incorrectly.

Finally, if you are unsure as to why you answered a question incorrectly and don't know why an answer is correct, it would be a good idea to review this Guide again. In addition, talk with someone else who may be taking the LEAB to compare answers and information or ask a tutor, friend or family member for help.

Remember, as you review your answers to the sample questions contained in the Ability Areas section, use the Error Analysis Form to evaluate/diagnose your test-taking behavior.

Instructions for Using the Error Analysis Form

Use the form below to analyze sample questions you answer incorrectly in the Ability Areas section of this Guide. As you work through the Ability Areas section, review each sample question as follows: If you answered the question correctly, place a check mark in the blank within the column labeled "CORRECT ANSWER." Then, for each incorrect answer, identify which of the seven reasons presented previously caused you to make the error and mark the appropriate blank in the set of columns labeled "REASONS FOR INCORRECT ANSWERS." Total the number of marks in each column to identify the kinds of errors you are making most often. Examine the ability area listed for each incorrectly answered question to determine those abilities that are giving you the most difficulty. Once you have identified the troublesome ability areas and errors, go back and review the test-taking strategies for the ability areas and the strategies for avoiding errors. Focus on those ability areas and errors that are causing you to choose incorrect answers most often.

Error Analysis Form: For Use with Sample Questions

Sample Question	Ability Area	Correct Answer	Reasons for Incorrect Answers						
			1	2	3	4	5	6	7
1	Written Expression								
2	Written Expression								
3	Written Comprehension								
4	Written Comprehension								
5	Problem Sensitivity								
6	Problem Sensitivity								
7	Deductive Reasoning								
8	Deductive Reasoning								
9	Inductive Reasoning								
10	Inductive Reasoning								
11	Information Ordering								
12	Information Ordering								
TOTAL QUESTIONS CORRECT									
TOTAL FOR EACH TYPE OF ERROR									

B. Ability Areas

This section of the Guide is designed to familiarize you with the nature of the questions you will encounter on the Ability Test, and to provide you with some useful strategies for responding to these types of questions. This portion of the Guide is organized around the ability areas that will be tested. For each ability area, the following information is provided:

Definition: In this section, the ability area is defined and you are provided with examples of how the ability applies to the job of an entry-level law enforcement officer.

Techniques: This section describes the various types of questions that will be used to assess each of the ability areas. For each type of question, you will be given some strategies to assist you in responding to such questions. For most question types, an illustrative example and explanation is provided to give you a better understanding of the question descriptions and test-taking strategies.

Sample Test Questions: Two sample test questions are provided for each ability area to be tested. Answers to the sample questions have been provided after all ability types are presented on pages 37 through 39. By answering the sample test questions you can assess your understanding of the information and test-taking strategies provided. Responding to the sample questions will also allow you to assess your current level of ability and to identify those ability areas upon which you should focus your preparation efforts. After responding to all 12 questions, use the Error Analysis Form on page 14 to evaluate your test-taking behavior.

Use the answer sheet provided below to record your answers to the 12 sample questions contained in the Ability Test-Taking Strategies section of this Guide.

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)

In summary, the information in this portion of the Guide is being presented to help you become familiar with the kinds of questions you will encounter on the Ability Test and to become comfortable with the kinds of strategies you should use when responding to these questions. This information should help you feel more comfortable when you take the Ability Test portion of the LEAB.

1. Written Expression

Definition: This ability involves using language in writing to communicate information or ideas to other people. These other people might include suspects, victims, witnesses, other law enforcement personnel, shop owners, or any individuals with whom the individual might come in contact. This ability includes vocabulary, knowledge of distinctions among words, and knowledge of grammar and the way words are ordered.

Examples of this ability include:

- documenting the details of an incident in a report
- composing a letter to a member of the community

Techniques: There are two types of Written Expression questions that you may encounter. The first type requires you to identify the most appropriate way to communicate a particular thought or idea to another individual. For these questions, it is important to ensure that the alternative chosen (a) accurately reflects the content of the original idea, and (b) expresses the original idea in the most clear and concise manner. Consider the example below.

Example 1:

As a law enforcement officer arrived at the scene of a disturbance in an abandoned warehouse, the officer noticed a van leaving the scene. Since the investigation revealed that the warehouse had been vandalized, the officer felt that the van leaving the scene should be included in the report. The most effective way for the officer to report this fact is to say:

- A. "As I arrived at the warehouse, I saw a van driving away from the scene."
- B. "A van which should not have been there, was at the warehouse."
- C. "The vandals escaped in a van."
- D. "I don't know if it's important but as I got there, I saw a vehicle leaving the scene."

Correct Response and Explanation:

A is the correct answer, because it correctly reflects the facts given in the question.

Answers B and C are incorrect, because they provide details which have not been established (the van should not have been there AND the vandals escaped in the van) in the question. The officer was only able to state that the vehicle was leaving the scene as the officer arrived.

Answer D is not the best answer because it leaves out the important fact that the vehicle was a van.

The second type of Written Expression question requires that you order your thoughts, or statements, in a logical sequence so that others will understand you. Such questions will start with a list of statements to be made by an individual. For example, the statements may represent sentences contained within a report describing the sequence of events that occurred at an incident. These statements will not be presented in the correct order. The response alternatives will present you with several possible ways to order the statements; however, only one correct possibility will be included among the alternatives provided.

Example 2:

Officer Wilkins is preparing a report on a hit and run accident. The report will include the following sentences. (These sentences are NOT listed in the correct order.)

1. The Dodge struck the right rear fender of Mrs. Smith's Ford, and continued on its way.
2. Mrs. Smith stated that she was making a left turn from 40th St. onto Third Avenue.
3. As the car passed, Mrs. Smith noticed the rear license plate #412AEJ.
4. Mrs. Smith complained to police of back pains and was removed by ambulance to Bellevue Hospital.
5. A green Dodge traveling on Third Avenue went through the red light at 40th St. and Third Avenue.

The most logical order for the above sentences to appear in the report is:

- A. 1, 3, 2, 5, 4.
- B. 2, 5, 1, 3, 4.
- C. 4, 5, 1, 2, 3.
- D. 5, 3, 1, 2, 4.

When responding to this type of question, look at the content of each sentence separately and determine whether it can stand alone, or whether it must precede or follow another sentence. If it can't stand alone, look for the sentence that contains the information you need. However, don't forget to evaluate that sentence in the same way as the first. Ask the questions, what happened first and what happened next? Similarly, consider whether there are sentences that the sentence under consideration cannot precede or follow. This also will help to narrow down the choices.

While we suggest that you identify the pairs of sentences that must (or cannot) go together, we'd like to discourage you from attempting to determine the correct order of all of the sentences before checking the response alternatives provided. The reason for this is that there may be several logical ways in which to order the sentences. However, only one correct possibility will be included among the alternatives provided. Instead, we suggest that you work through each of the alternatives presented one-by-one, keeping in mind the sentences that must (or cannot) appear together. Alternatives that are not feasible should be eliminated until you find the one alternative that places the sentences in an appropriate order.

If you're not sure which sentence should be first, you may find it easier to note which sentence should be last. This will help you considerably in eliminating obviously wrong choices. If you don't know which sentence should be first nor last, then go by what you know for sure. In other words, even if you do not know the proper order of all of the sentences, nor which sentence should come first or last, you may know that one of the sentences should come after another. If so, you may be able to choose the correct answer by using just those two sentences to answer the question. **The key thing to remember is that you practically never need to know the correct order of all of the sentences to answer these types of questions.**

Correct Response and Explanation:

The correct answer is B. To identify the correct order, the sentences for the report need to be placed into the proper time sequence. Sentences 1, 2, 3 and 5 describe the events of the accident. The proper sequence for these four events is 2, 5, 1, 3. (Mrs. Smith is attempting a left turn, a Dodge ran the red light, struck her vehicle and continued on its way, and as it passed she noticed its license plate number.) Answer B is the only alternative with this sequence.

Sample Test Questions:

Sample Question 1:

1. A law enforcement officer is writing an outline for a presentation to a local citizen's group on the role of law enforcement in responding to domestic conflicts. During the presentation, the officer would like to explain that law enforcement officers are often contacted because a domestic conflict is disturbing neighbors. In addition, the officer will point out that many calls occur prior to a crime being committed. This is effective, because one of the objectives of law enforcement is to stop crime before it starts. The most effective way for the officer to sum up the role of law enforcement in responding to domestic conflicts during the presentation is to say:
 - A. "Since frequently no crime has been committed, the role of law enforcement in domestic conflicts is fairly limited."
 - B. "In responding to domestic conflicts, the officer's function is to restore order and prevent possible crimes from occurring."
 - C. "The officer's main goal in responding to domestic conflicts is to protect the innocent."
 - D. "Many people involved in domestic conflicts call the police in order to have an objective authority help settle disputes."

Sample Question 2:

2. Officer Turner is writing a report on a homicide investigation. The report will include the following five sentences. (These sentences are NOT listed in the correct order.)
 1. I noticed a display case for handguns was open, but there were no guns in it.
 2. We got a call reporting that the front door of a pawnshop was open, but the owner was not there.
 3. We interviewed tenants of the apartments in the upstairs sections of the same building.
 4. Upon arrival, we discovered the body of the shop owner, apparently dead from knife wounds to the chest.
 5. I called an ambulance to pick up the victim.

The most logical order for the above sentences to appear in the report is:

- A. 2, 1, 4, 5, 3.
- B. 2, 4, 5, 1, 3.
- C. 2, 5, 1, 3, 4.
- D. 4, 5, 2, 3, 1.

2. Written Comprehension

Definition: This is the ability to understand written language. This ability involves the understanding of individual words as well as patterns of words (sentences and phrases), so it is more than simply vocabulary. It is also the ability to read a sentence or series of sentences and understand the meaning. This involves receiving information, not giving it.

Examples of this ability include:

- reading narrative material, such as an arrest report
- following written instructions

Techniques: Items designed to test Written Comprehension will include a passage describing a police-related incident or set of operating procedures. These passages will be approximately one-half to a full page in length and will be followed by two or more test questions. These questions will test your understanding of the information presented in the passage.

For some candidates, these questions may prove to be difficult simply because of the initial amount of information you'll be given. Some of the techniques you can use on these questions have already been discussed as part of the general test-taking strategies.

- A. One of the most useful techniques involves reading the test questions and possible answers before reading the passage to help you identify and focus on the information that is being sought. You may find that you locate the answer to one of the questions related to a passage before you even finish reading the passage. If so, answer the question right away. As you go from one sentence or paragraph to the next in the passage, you may have to glance back at the questions to remind yourself of the specific details for which you are searching.
- B. Another extremely useful technique is to identify key words once you have read the questions related to a passage and know what to focus on. For example, if the questions related to the passage seek information about a particular person (e.g., Mr. Jones), then make note of Mr. Jones' name when you come to it in the passage, so that you don't waste time looking back through the passage later. Also, make the passage easier to understand by breaking sentences down into key phrases.
- C. These tend to be time consuming questions which you may not have the opportunity to read more than once. A third technique is to read for understanding the first time and avoid getting bogged down by individual words that you do not understand. Sometimes you can tell the meaning of a word from the context within which it has been placed, or you may not need to understand the word at all to understand the passage. We caution you, however, do not try to read faster than you can read with comprehension.
- D. Try to form a picture in your mind as you read. School books used to teach reading contain many pictures, since pictures aid in comprehension.
- E. Ask yourself questions as you read. When you finish reading a paragraph or a long sentence, ask yourself what the passage or sentence was about. What was the point of the paragraph or sentence?

It's important to note that most of the suggested strategies for Written Comprehension questions are designed to help candidates understand the relatively lengthy passage of information which precede these questions. Thus, these strategies would be useful with any type of question that requires candidates to read and understand a large amount of information.

Sample Test Questions:

Use the information in the following passage to answer questions 3 and 4.

Two patrol vehicles were dispatched to a home on the evening of June 12, at 9:47 p.m. The owner of the home had reported a burglary which took place while he and his wife were out. The owner also stated that the suspects were still in the home when he and his wife arrived, but they fled the scene in a dark blue sedan.

Upon arrival at the home, Officers Baker and Reigner began to question Mr. Corneal. In the meantime, Officers Lucas and Gentry conducted a preliminary investigation of the home to determine the activities of the suspects. The questioning revealed that Mr. Corneal collected exotic guns and had accumulated an extensive collection. In addition, Mrs. Corneal had several sets of antique jewelry. When questioned as to who knew about the collections, Mr. Corneal stated that only friends of the family and members of the rifle club were aware of them. He was further questioned to determine whether any unusual events had occurred recently that might be related to this incident. Mr. Corneal stated that they had extensive remodeling done to the interior of the home during the past six weeks by several different companies. Officer Reigner asked if they had reason to suspect any of the workers. Mr. Corneal stated that several members of the crew had shown an interest in seeing and discussing his collection of guns, but that it would be very difficult to determine which individuals, if any, may have been involved. Officer Reigner requested the names of the companies and the services they performed.

After a few minutes, Officers Lucas and Gentry returned from their search of the home. They had determined that the suspects concentrated their efforts on the two collections, since the only other areas of the home that were disturbed were ones which typically contain money (e.g., dresser top, dresser drawers). They concluded that the suspects must have been aware of the collections before entering the home.

Sample Question 3:

3. According to the preceding passage, when the Corneals arrived home on the evening of June 12, they discovered that their home had been:
- A. ransacked, but nothing was stolen.
 - B. entered, and the television, stereo, and computer were stolen.
 - C. entered, and the suspects were still in the home.
 - D. burglarized, and five antique guns and several pieces of exotic jewelry were the items that were taken.

Sample Question 4:

4. According to the preceding passage, considering the burglary and subsequent investigation described above, the ONLY statement that accurately reflects the information gathered is:
- A. Officer Reigner requested the names of the companies and the services they performed.
 - B. Mrs. Corneal seemed to be the one to answer all of the officers' questions.
 - C. Officer Baker helped with the search of the home.
 - D. The burglars fled the scene in a dark blue van.

3. Problem Sensitivity

Definition: This is the ability to recognize or identify the existence of problems. It involves both the recognition of the problem as a whole and the elements of the problem. This ability does not include the ability to solve the problem, only the ability to identify or recognize the problem.

Examples of this ability include recognizing when:

- an explanation that someone provides is farfetched and probably not truthful
- to stop and question a group of individuals
- to report a malfunction in the patrol car

Techniques: There are two types of Problem Sensitivity questions that you may encounter. The first type of Problem Sensitivity question will consist of stories or descriptions by victims and witnesses. For these questions, a problem exists when a victim or witness gives information that is different from information supplied by other victims or witnesses. Consider the example below.

Example 1:

Officer Dunn interviewed four witnesses to a stabbing that took place in a crowded bar and grill. Each of the witnesses saw the suspect as he was fleeing the bar. They described the suspect as follows:

Witness 1 - "He was a White male, about 25 to 30 years of age, with brown, shoulder-length hair. He was about 6'0" and weighed about 185 pounds. He wore black jeans and a brown leather jacket. He had a small scar on his forehead."

Witness 2 - "He was a male, White or Hispanic, late twenties, around 5'10", about 190 pounds, with long, brown hair. He was stocky and wore dark pants and a brownish jacket."

Witness 3 - "He was a light skinned male, possibly White or Hispanic, in his mid-twenties, about 6' weighing about 180 pounds. He had a tattoo of a panther on his right forearm. He had moderately long hair and wore a brown shirt and dark pants."

Witness 4 - "He was a White male, around 25 years old, about 5'11" and weighing about 185 pounds. His hair was brown and over his ears, fairly long. He wore darkish clothes, I'm not sure of the color of his jacket or pants."

Given the above information, Officer Dunn should recognize that there is a problem with the description given by witness:

- A. 1.
- B. 2.
- C. 3.
- D. 4.

Correct Response and Explanation:

C is the correct answer. There is agreement that the suspect was a White or Hispanic male in his mid-to-late twenties with long, brown hair who was approximately 6' tall and 185 pounds. In addition, his pants and jacket were dark in color. There were only two discrepancies across the descriptions. Witness 1 reported that the suspect had a small scar on his forehead. Witness 3 reported a tattoo of a panther on the suspect's right forearm. Of the two, it is much harder to explain how a tattoo of a panther could be overlooked by three of four witnesses AND how one witness could see it when the other three witnesses all stated that the suspect had a jacket on during the incident. Thus, C is the best answer.

The second type of Problem Sensitivity question will often begin with the presentation of rules, procedures or recommended practices followed by a description of an incident or situation in which these rules should be applied. Based on the applicable rules, you will be required to identify a problem (or the most serious of several problems) in the way the incident was handled. Because this type of Problem Sensitivity question typically involves the presentation of a large amount of initial information, many of the suggested strategies for Written Comprehension questions (e.g., identifying key information) will also assist you with these types of questions.

Example 2:

Use the information in the following passage to answer this question.

Police and Fire Departments have standard procedures for handling bomb threats that include the following:

1. Trained police personnel direct operations at the scene; fire personnel stand by and typically assist in rescue operations.
2. While radios may be left on at the scene of an unexploded device to receive instructions from the Communications Office, no radio transmissions are to be made from the scene, because radio signals can detonate an explosive device.
3. The decision to evacuate a building is to be made by the management of the building, unless an explosive device has been found; in such an instance, police personnel in charge of the scene make the evacuation decision.
4. No public statements are to be made to the media by police or fire personnel.
5. If one device detonates, there is always the possibility of a second or third device, so police and fire personnel should stay clear of the area until it has been determined (usually by Bomb Squad Personnel) to be safe.

According to the preceding passage, of the four actions described below, the potentially most serious error would occur if:

- A. Immediately after a second bomb exploded in a bank, Firefighter Thomas entered the bank to conduct rescue operations.
- B. While standing by at the scene of a bomb threat, Police Lieutenant Caffey provided information regarding the incident to a reporter.
- C. While standing by at the scene of a bomb threat, Fire Lieutenant Griffin received instructions from the Communications Office via his radio.
- D. After an unexploded device was discovered in an apartment building, Assistant Police Chief Johnson ordered the apartment building manager to evacuate the building.

Correct Response and Explanation:

A is the correct answer. Answers A and B represent the only mistakes. With respect to answer A, Firefighter Thomas should have waited to enter the bank until the Bomb Squad Personnel determined that it was safe (according to procedure 5). With respect to answer B, no police or fire personnel, should make a public statement to the media (according to procedure 4). Since the question asks for the "potentially most serious error," the best answer is A, since entering the bank without proper safety clearance is a direct risk to one's own life and to bystanders.

C is incorrect, because it is acceptable to receive instructions via the radio as long as no transmissions are made (according to procedure 2).

D is incorrect, because the actions of Assistant Police Chief Johnson were appropriate (according to procedure 3).

Sample Test Questions:

Sample Question 5:

Use the information in the following passage to answer question 5.

Law enforcement officers should follow the guidelines presented below when dealing with individuals suspected of driving while under the influence of alcohol:

1. A separate citation shall be issued for any traffic offense that originally brought the driver to the attention of the officers (e.g., reckless operation of motor vehicle).
 2. If the driver refuses to submit to a blood alcohol test or submits to such tests and scores above the limit, the arresting officer should order the driver to surrender his/her license and issue a citation for driving under the influence.
 3. If the driver scores below the legal limit on the blood alcohol test, his/her license shall not be confiscated. The results of field tests (e.g., walking heel to toe on a straight line) have no influence on this guideline.
 4. Even if the driver scores below the legal limit, the driver can still be charged with driving under the influence, if the officer can justify the charge through the use of field tests.
5. Consider the following situation:

Officer Kelley notices a car swerving in and out of its lane. Officer Kelley stops the car and asks the driver to submit to a test for driving under the influence of alcohol. The driver submits to the test and scores below the legal limit. However, based on the results of several field tests, Officer Kelley still charges the driver with driving under the influence. Officer Kelley then orders the driver to surrender his license.

According to the preceding passage, Officer Kelley's actions were:

- A. appropriate, because they were consistent with the guidelines provided.
- B. problematic, because the driver was forced to surrender his license.
- C. problematic, because Officer Kelley did not have a witness to the field tests.
- D. problematic, because Officer Kelley charged the driver with driving under the influence even though the driver passed the blood alcohol test.

Sample Question 6:

6. Officer Johnson interviewed four witnesses to a bank robbery. Each of the witnesses described the suspects as follows:

Witness 1 - "There were two of them. Both male, about 6'2" tall, with medium builds. One of them had dark hair and was wearing jeans, a leather jacket, and sunglasses. The other had short, blond hair and was wearing jeans and a red, light-weight jacket. Only the one with the sunglasses spoke, and he had a foreign accent."

Witness 2 - "Both of the men were about the same size. Maybe 6', about 180 pounds. One of them was wearing a leather jacket and the other one was wearing a light-weight, red jacket. I couldn't see their faces because one had on a ski mask and the other had on dark sunglasses. The one with the sunglasses had dark hair."

Witness 3 - "Both of the men were about 6'1" and 180 pounds. One had on a leather jacket, the other a red windbreaker. Both men were wearing jeans and tennis shoes. One had dark hair and sunglasses on. The other one was wearing some kind of stocking cap that was pulled down over his face."

Witness 4 - "Both men had on jeans, tennis shoes and jackets. One jacket was leather, the other bright red. One of the men had dark hair, and I could not see the other one's face because of a ski mask. They both looked a little over 6' tall. Only the one with the dark hair spoke."

Given the above information, Officer Johnson should recognize that there is a problem with the description provided by witness:

- A. 1.
- B. 2.
- C. 3.
- D. 4.

4. Deductive Reasoning

Definition: This is the ability to apply general rules or regulations to specific cases or to proceed from stated principles to logical conclusions.

Examples of this ability include:

- identifying a particular situation as a civil or criminal case
- distinguishing between burglary and trespass, or between assault and harassment
- determining whether a homeless person should be referred to a charitable organization or a public welfare agency
- determining which factors to take into account when drawing a weapon

Techniques: There are four types of Deductive Reasoning questions that you may encounter, questions based on verbal rules and procedures, questions based on quantitative rules, questions based on the assignment of a specific case to one of several given classifications, and law interpretation questions.

For Questions Based on Verbal or Quantitative Rules and Procedures: The first and second types of questions will start with the presentation of general verbal or quantitative rules and procedures and require candidates to apply the general rules to specific cases. The general quantitative rules and procedures will be presented in tabular fashion. Rules and procedures are intended to ensure that law enforcement officers make correct decisions in a wide variety of situations. There are four factors to attend to when answering questions about rules and procedures:

1. **PAY ATTENTION TO THE DEFINITE ORDER IN WHICH STEPS ARE TAKEN:** Many rules and procedures require law enforcement officers to go through a series of actions. There is often a correct order for these actions. Make sure the correct answer has that same sequence of steps.
2. **PAY ATTENTION TO WHEN A RULE OR PROCEDURE IS IN EFFECT:** Some rules apply only to certain types of situations or certain periods of time. Make sure the correct answer applies to the situation and time in question.
3. **PAY CLOSE ATTENTION TO EXCEPTIONS:** Pay particular attention to any exceptions given in the rule or procedure. Identify key words such as **except**, **unless**, **if**, and **only** that "harden" or "soften" statements.
4. **PAY ATTENTION TO COMPLETENESS:** If a procedure requires law enforcement officers to do several things, make certain the correct answer allows that all those things can be done. However, if the question is just focusing on a few things, or on a series of many, make sure the correct answer doesn't eliminate the possibility of the events taking place.

For Questions Based on the Assignment of a Specific Case to One of Several Given

Classifications: The third type of question will start with the presentation of categories or classifications and require candidates to assign a specific case to one of the given categories or classifications. The following strategy may be helpful in responding to this type of Deductive Reasoning question.

1. Determine how the classifications or categories differ.
2. Review the particular incident presented in the question with regard to these differences.
3. Identify the classification or category that matches the particular incident with regard to these differences.

Example 1:

Use the information in the following passage to answer the next question.

Law enforcement officers categorize accidents into the four classes described below:

CLASS I - Any accident involving one vehicle but no injuries.

CLASS II - Any accident involving two vehicles but no injuries or one vehicle and at least one injury.

CLASS III - Any accident involving two or more vehicles and multiple injuries.

CLASS IV - Any accident involving a hazardous materials spill.

Consider the following situation:

A law enforcement officer was dispatched to the scene of an accident. When the officer arrived, the officer found a nine-year-old girl with a pair of roller blades lying on the road. Witnesses stated that a small blue car swerved to avoid hitting the girl, but the car's back bumper hit the girl as it passed. The driver did not stop to see if the girl was hurt. According to the preceding passage, the accident could be categorized most accurately as Class:

- A. I.
- B. II.
- C. III.
- D. IV.

Correct Response and Explanation:

B is the correct answer. The accident involved one vehicle and one injury.

A is incorrect because Class I involves one vehicle and no injuries, but the situation presented involved one injury.

C is incorrect because Class III involves two vehicles with multiple injuries, but the situation presented involved only one vehicle and one injury.

D is incorrect because Class IV involves a hazardous materials spill, but the situation presented did not involve a spill.

For Law Interpretation Questions: The fourth type of Deductive Reasoning question will provide you with a definition of a police-related term (usually a crime) and ask you to interpret the term with respect to a specific police-related situation. Like questions which list procedures (e.g., Information Ordering), these questions require great attention to detail. You must carefully analyze the definition of a crime.

Analyzing the Definition: The definition of a crime usually has several parts. Each part is referred to as an element. The elements are like the pieces of a puzzle; all the elements must be present to make up the crime. If any one of the elements is missing, that particular crime has not been committed.

There are usually several elements in a legal definition. The definition must be broken down into these separate elements. Once the elements of the definition are separated, identify key words and take note of words that "harden" or "soften" statements in the definition. Then, check to see if the elements apply to the situation. The elements must be compared to the situation on an item-by-item basis. Specifically, watch out for the words **AND** and **OR**.

AND means that one element must be present in addition to another for the crime to be present.

OR means there is a choice of elements; only one of the choices must be present for the crime to be committed.

For example, consider the definition of **DISORDERLY CONDUCT**: When, with intent to cause public inconvenience, annoyance or alarm or recklessly creating a risk thereof, a person engages in fighting or in violent, tumultuous or threatening behavior.

The slash marks below indicate how you can separate the definition to make it easier to understand:

DISORDERLY CONDUCT: When, / with intent to cause public inconvenience, annoyance or alarm / or recklessly creating a risk thereof, / a person engages in fighting / or in violent, tumultuous or threatening behavior.

For the crime of **DISORDERLY CONDUCT**:

Is it necessary to intend public inconvenience, annoyance or alarm? No. The definition says "intent to cause... **OR** recklessly create a risk thereof..."

Is it necessary to be fighting? No. The definition says "engages in fighting **OR** in violent, tumultuous **OR** threatening behavior."

Practice using this strategy with the example below:

Example 2:

Criminal Mischief - the crime of criminal mischief is committed when:

1. A person intentionally damages property belonging to another and the amount of the damage is 250 dollars or more; or
2. A person intentionally damages property, in any amount, by means of explosives.

According to the definition given, the following is the best example of criminal mischief:

- A. Frank is playing baseball with his friends when he hits a ball that breaks the 2,000 dollar window of Ford Motors.
- B. Tony is chopping down a tree in his backyard. The tree falls the wrong way and hits the neighbor's house, causing 3,500 dollars worth of damage.
- C. Harold gets mad after an argument with his wife and throws his 600 dollar T.V. through the 200 dollar picture window of his house.
- D. Lloyd decides to get even with a neighbor and throws an M-80 firecracker onto his neighbor's porch on Halloween night. The only damage is to his neighbor's screen door, about 25 dollars.

Correct Response and Explanation:

D is the correct answer. Intentional damage using explosives fits part 2 of the Criminal Mischief definition.

A and B are incorrect because there was no intent in either case to damage property (the window or the house, respectively).

C is incorrect because, although there was intent, no explosives were used **AND** the damage to property belonging to another was not equal to or greater than 250 dollars, because Harold damaged his own property.

Sample Test Questions:

Sample Question 7:

Use the information in the following table to answer question 7.

Law enforcement officers are required to call for backup when responding to certain offenses. Examples of offenses requiring backup are listed below, along with the number of backup officers needed:

<u>OFFENSES</u>	<u>NUMBER OF BACKUP OFFICERS</u>
Speeding violations of more than 30 mph over the posted speed limit.	1
Robbery whereby the police are notified within 30 minutes after the incident.	1
Fatal traffic accident where two or less people are killed.	2
Any situation involving hostages.	3
Any situation where three or more people are killed.	3
Any situation where there are two or more armed suspects.	3

7. According to the preceding table, Officer Latimer should call for backup in the following situation:

- A. A manager of a store reported a robbery that occurred more than 30 minutes ago after untying himself from a chair.
- B. A motorist traveled 35 mph in a 65-mph zone because of poor road conditions.
- C. A suspect armed with an automatic rifle has been holding employees and customers of a liquor store hostage for 40 minutes.
- D. Two people suffered broken bones in a traffic accident.

Sample Question 8:

Use the information in the following passage to answer question 8.

The following dress code guidelines apply to law enforcement officers.

1. The Antron Jacket will be worn for outside duty during the months of November through February and whenever the temperature is below 55 degrees.
2. The Eisenhower Jacket shall be worn for outside duty during the months of March, April, May, September, and October, only if the temperature is below 65 degrees. Officers at the rank of Captain or above may wear the Double Breasted Blouse instead of the Eisenhower Jacket.
3. A navy blue, long sleeve uniform shirt shall be the standard shirt to be worn with all jackets. All individuals at the rank of Captain or above will substitute a white shirt.
4. A short sleeve shirt may be worn whenever the temperature is above 70 degrees during the months of May through September.
5. Officers assigned to indoor duty may also substitute a short sleeve shirt for the long sleeve shirt.
6. Regulation trousers shall be worn. The black trouser braid or stripe shall be worn by individuals at the rank of Lieutenant and above.

TYPICAL RANKS

(from highest rank to lowest rank):

- | | |
|--------------------|-------------------|
| 1. Chief of Police | 4. Lieutenant |
| 2. Deputy Chief | 5. Sergeant |
| 3. Captain | 6. Patrol Officer |

8. Consider the following situation:

The temperature for the day is expected to stay right around 60 degrees. The date is September 15. According to the preceding passage, if Captain Cross was assigned to outside duty she should wear:

- A. an Eisenhower Jacket, a white, long sleeve shirt and regulation trousers with a black stripe.
- B. a Double Breasted Blouse, a navy blue, long sleeve shirt and regulation trousers.
- C. an Antron Jacket, a white, long sleeve shirt and regulation trousers with a black braid.
- D. a Double Breasted Blouse, a white, short sleeve shirt and regulation trousers with a black braid.

5. Inductive Reasoning

Definition: This is the ability to find a rule or concept that fits the situation. This would include coming up with a logical explanation for a series of events that seem to be unrelated. In addition, this ability involves understanding how a string of objects or events might be connected.

Examples of this ability include:

- coming upon an accident scene and correctly guessing what must have happened from the position of the cars, the skid marks, and the road conditions
- recognizing that the same pattern applies to a series of burglaries or purse snatchings
- examining a log book for previous days in order to see if there is some pattern that can be found for a series of events

Techniques: Inductive Reasoning questions require that you notice something common among a series of events or objects. In order to do this, you have to be able to identify the details that are important to answering a question. The majority of questions for Inductive Reasoning will start with a passage which provides you with all the information you will need to answer the question. Scan the passage to get an idea of what it's about and then read the questions. The questions may ask you to identify which parts of the passage are similar or different. For example there may be a description of four different incidents of rape and you may be asked which ones might have been committed by the same suspect. This will require you to compare the four descriptions, point-by-point and to note differences that would rule out the same suspect. For example, if a heavy, White male, committed one rape and a thin, Black male committed another rape, they could not have been committed by the same suspect. You might find it useful to compare objects or suspects by asking, "Are they the same or different?" The table below shows how you might compare four rape suspects to answer this question.

	Suspect Description				
	Height	Weight	Race	Age	Scars
Rape 1	5'10"	170	W	30	No
Rape 2	5'3"	120	W	16	Face
Rape 3	5'8"	155	B	26	No
Rape 4	5'9"	165	W	35	No

From looking at this table, you can be fairly sure that the suspect in Rape 3 was not involved in rapes 1, 2, or 4 since he was described as Black and the other suspects are White. Also, the suspect in Rape 2 was probably not involved in 1 or 4, because he is too short (5'3") and the other two suspects are described as average in height. On the other hand, the same suspect could have committed Rape 1 and Rape 4, since there are only slight differences in estimated height, weight and age.

Remember, when you are reading the question, identify the pieces of important information. This might include age, height, weight, scars, tattoos, etc. of a suspect. When considering the example on the next page, compare the suspects in a similar way and ask if they are the same or different.

Example 1:

Officer Crawford received a series of reports from victims who were mugged in the early evening as they were exiting from the Spruce Street subway station. The description of each suspect is as follows:

Report 1 (November 16) - male, White, early 30s, around 5'10", about 180 pounds, dark hair, mustache, one gold earring, blue jeans, black jacket, running shoes.

Report 2 (November 20) - male, White, 25-30, about 5'6", around 120 pounds, dark hair, dark glasses, one gold earring, blue jeans, green sweatshirt, running shoes.

Report 3 (November 21) - male, White, 40-45, almost 5'10", about 130-140 pounds, dark hair, mustache, one gold earring, blue jeans, black jacket, running shoes.

On November 23rd, a male who was loitering near the subway station mugged another person. However, a witness saw the mugging, called 911, and the male was apprehended two blocks away. The description of the suspect is as follows:

Report 4 (November 23) - male, White, 25-30, 5'10", 175 pounds, dark hair, mustache, blue jeans, black jacket, green ski cap, boots.

Based on the description given above of the suspects in the first three reports, the suspect in report 4 should also be considered a suspect in report(s):

- A. 1 only.
- B. 1 and 2 only.
- C. 2 and 3 only.
- D. 1, 2, and 3.

Correct Response and Explanation:

The important differences among the suspects in the four reports center around three characteristics -- age, height and weight. Report 4 does not match Report 2, because the suspects differ substantially with respect to height and weight. Report 4 does not match Report 3, because the suspects differ substantially with respect to age and weight. Report 4 does closely match Report 1. Comparing the suspects in the reports allow us to determine the correct answer, A.

Sample Test Questions:

Sample Question 9:

Use the information in the following passage to answer question 9.

Officer Thompson has noticed that in his patrol area, most of the assaults occur in the eastern and northern sections, while most automobile thefts occur in the southern and western sections and most traffic accidents occur in the western section.

The majority of automobile thefts take place between 3 a.m. and 7 a.m. Most of the traffic accidents occur either between 7 a.m. and 9 a.m. or between 5 p.m. and 8 p.m. Most of the assaults occur between 7 p.m. and 9 p.m. or between 11 p.m. and 4 a.m.

In addition, the traffic accidents almost always occur on Mondays and Fridays, the assaults take place on any day from Wednesday through Saturday, and automobile thefts typically take place on weekday mornings.

9. According to the preceding passage, Officer Thompson most likely would be able to reduce the number of assaults by patrolling the:
- A. eastern section between 5 a.m. and 1 p.m.
 - B. eastern section between 11 a.m. and 5 p.m.
 - C. western section between 10 p.m. and 6 a.m.
 - D. northern section between 8 p.m. and 1 a.m.

Sample Question 10:

10. Officer Riggins received a series of reports from victims who were mugged outside the South Side Shopping Plaza. The description of each suspect is as follows:

Incident 1: (May 7) - male, Black, early 20s, almost 5'9", about 170 pounds, black hair, tattoo on his upper arm, blue jeans and t-shirt.

Incident 2: (May 13) - male, Black, 20-26, about 5'10", around 175 pounds, black hair, tattoo on left hand, tank top, jeans and sneakers.

Incident 3: (May 15) - male, Black, late teens, about 5'11", around 190 pounds, brown hair, snake tattoos on both forearms and red tank top.

Incident 4: (May 20) - male, Black, 17-21, 6'1"-6'2", about 210 pounds, brown hair, brown pants, a three-quarter length sleeve shirt, and no jewelry.

Incident 5: (May 21) - male, Black, 16-20, about 6'7", around 230 pounds, black hair, an earring in the left ear, blue jeans and a tank top.

On June 3rd, a suspect was apprehended after mugging a person outside the South Side Shopping Plaza. The description of the suspect is as follows:

Incident 6: (June 3) – male, Black, 23, 5'10", 180 pounds, black hair, a tattoo of a cobra on his bicep, cut-off blue jeans and a muscle shirt.

Based on the descriptions given above of the suspects in the first five incidents, the suspect in incident 6 should also be considered a suspect in incident:

- A. 1.
- B. 2.
- C. 3.
- D. 5.

6. Information Ordering

Definition: This is the ability to apply rules to a situation for the purpose of putting the information in the best or most appropriate sequence. In order to use this ability, rules or instructions must exist for the person to know what the correct order of information is. This ability also involves the application of specified sequences or procedures to a given situation. This ability would come into play particularly when deciding which set of procedures to follow first, which to follow next, and so on.

Examples of this ability include:

- determining what should be done first, second, and so on in a first aid situation
- arranging the importance of certain activities in a traffic accident or domestic dispute
- determining whether traffic control or first aid procedures take priority and should be implemented first at a traffic accident on a busy street when a serious injury is involved

Techniques: These questions usually start with the relevant rules, procedures, or other items of information. In some instances, procedures are presented in the order in which they must be performed. Candidates are then given a specific set of events and asked to identify the next step which must be followed (based on the sequence of procedures specified in the initial passage). Such questions require you to closely follow the sequence of procedures presented in the initial passage. Consider the example below.

Example 1:

Use the information in the following passage to answer the next question.

When responding to an incident involving a person needing medical assistance, law enforcement officers should follow these steps in the order given:

1. Render reasonable aid to the sick or injured person.
2. Request an ambulance or doctor, if necessary.
3. Notify the Radio Dispatcher if the person is wearing a Medic-Alert emblem, indicating that the person suffers from diabetes, heart disease, or other serious medical problems.
4. Wait to direct the ambulance to the scene, or instruct someone else at the scene to do so.
5. Make a second call in 20 minutes if the ambulance does not arrive.
6. Make an Activity Log entry, including the name of the person notified regarding the Medic-Alert emblem.

While on foot patrol, Officer Grayson is approached by a woman who informs the officer that an elderly man has just collapsed on the sidewalk around the corner. Officer Grayson, while offering aid to the man, notices that the man is wearing a Medic-Alert emblem indicating heart disease. Officer Grayson, requests an ambulance to respond. According to the preceding passage, the next step the officer should take is to:

- A. wait for the ambulance to arrive.
- B. have another person direct the ambulance to the scene.
- C. place a second call for the ambulance after 20 minutes.
- D. inform the Radio Dispatcher of the Medic-Alert emblem.

Correct Response and Explanation:

The correct answer is D. There are two key points to this question. First, the last step completed by Officer Grayson was to request an ambulance (step 2). Second, the next step is a conditional one. The radio dispatcher is only notified if "the person is wearing a Medic-Alert emblem." According to the description of the incident, prior to calling for the ambulance, Grayson "notices that the man is wearing a Medic-Alert emblem." Thus, the next step would be number 3 (as indicated by answer D). Answers A, B and C are incorrect, because they correspond to steps 4, 4 and 5, respectively.

In other Information Ordering questions, the initial items of information may be presented out of order and you may be asked to arrange the information in the most logical order.

Example 2:

Law enforcement officers may discover firearms at crime scenes. The following steps should be used when discovering a firearm at a crime scene. (These steps are NOT listed in the correct order.)

1. Note the position of the hammer, and whether the safety latch is on or off.
2. Unload the firearm, if possible, to ensure safe transportation.
3. Place each recovered spent cartridge separately in an envelope or box.
4. Carefully transport the firearm, cartridges, and cartridge casings to the lab for analysis.
5. Photograph the firearm close up and sketch each cartridge case position.
6. Wrap recovered cartridges in tissue paper.

The most logical order for the above steps is:

- A. 1, 5, 2, 6, 3, 4.
- B. 2, 6, 3, 5, 1, 4.
- C. 5, 1, 3, 6, 2, 4.
- D. 5, 4, 1, 6, 3, 2.

The approach recommended for these types of questions is similar to the approach recommended for the second type of Written Expression question. That is, put in order only as much information as you need to answer the question. Don't try to put all of the steps in correct order. You could be wasting valuable time doing this, because you usually do not need to put all of the steps in order to identify the correct answer. Consider only the order shown in each of the response alternatives. Go through the alternatives one-by-one. Examine each alternative only as far as the point where you find it to be wrong. Then proceed to the next response alternative.

If you're not sure which step should be first on the list, you may find it easier to note which step should be last. This will help you considerably in eliminating obviously wrong choices. If you don't know which step should be first nor last, then go by what you know for sure. In other words, even if you do not know the proper order of all of the steps, nor which step should come first or last, you may know that one of the steps should come after another. If so, you may be able to choose the correct answer by using just those two steps to answer the question. **The key thing to remember is that you practically never need to know the correct order of all of the steps to answer these types of questions.**

Correct Response and Explanation:

The correct answer is A. To determine the correct answer, the steps must be listed in the correct time sequence. Steps 2, 3, 5 and 6 deal with handling the cartridges (or cartridge casings) which are either in the firearm or ejected to the ground. In terms of these four steps, 5 must occur before 2, 2 before 6 and 6 before 3. In other words, you must sketch the cartridge positions before unloading cartridges from the firearm. The firearm must be unloaded before the cartridges can be wrapped. Once the cartridges are wrapped, then the recovered cartridges are placed in a separate envelope or box. The only answer with the 5, 2, 6, 3 sequence is answer A.

Sample Test Questions:

Sample Question 11:

Use the information in the following passage to answer question 11.

When dusting objects at a crime scene for fingerprints, law enforcement officers should follow these steps in the order given:

1. Choose a powder color in contrast with the surface to be dusted.
 2. Dip a brush into the powder and work the powder into the fibers of the brush.
 3. Lift the brush out of the powder, checking to make sure there is not too much powder on the brush.
 4. Holding the brush lightly, shake a light dusting of powder onto the suspected area.
 5. If a light pattern shows up, brush more powder into the pattern lightly with the flow of the ridges.
 6. Lightly clean up the pattern by brushing excess powder out of the voids between the ridges to define the print.
 7. Photograph the impression and proceed to lift the impression with transparent tape.
11. An officer is dusting the top of a dresser for fingerprints and notices a pattern emerging. According to the preceding passage, the officer's next step should be to:
- A. follow along the pattern with additional powder on the brush.
 - B. shake a light dusting of powder over the entire area.
 - C. shake the brush lightly to make sure there is no excess powder on it.
 - D. photograph the impression and lift the impression with transparent tape.

Sample Question 12:

12. Law enforcement officers are required to search all individuals that have been taken into custody prior to placing individuals in a station holding cell. The following steps should be used when searching a prisoner. (These steps are NOT listed in the correct order.)

1. Lower both of your hands to the base of the prisoner's neck and proceed with the search by covering the chest, stomach, and back.
2. Have the prisoner empty all pockets in pants, shirt, coat and jacket.
3. Be sure no other prisoners are in the room when the search takes place.
4. From the waistline, proceed down the legs, using both hands on one leg and then the other.
5. Have the prisoner stand facing a wall, back to you, legs spread and arms extended straight out.
6. From behind, using both hands, start at the forehead and run your fingers or a comb through the prisoner's hair.

The most logical order for the above steps is:

- A. 2, 1, 4, 3, 5, 6.
- B. 3, 2, 5, 6, 1, 4.
- C. 3, 5, 2, 6, 4, 1.
- D. 3, 5, 4, 2, 6, 1.

C. Sample Test Questions: Answers and Explanations

The answers to the sample test questions for the six ability areas are listed below. Explanations of the answers follow this list.

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

Written Expression questions - 1 and 2.

1. B is the correct answer. It correctly reflects the role of law enforcement in responding to domestic conflicts -- 1) handling a conflict that disturbs the neighbors AND 2) stopping crime before it starts.

Although alternatives A, C and D do relate (in varying degrees) to other aspects of law enforcement involvement in domestic conflicts, none of these aspects are directly mentioned as information in the question.

2. The correct answer is B. To identify the correct order, the sentences to be included in the report need to be ordered into the proper time sequence. The clearest clues involve sentences 4 and 2.

Sentence 4 begins "Upon arrival..." Therefore, sentence 4 must separate the actions that occurred prior to arriving at the scene from those events occurring after arriving at the scene. Sentence 2 is the only statement regarding actions prior to arriving (i.e., getting the call). Thus, sentence 2 must occur first and be followed by sentence 4. Only answer B begins with the sequence 2, 4. In addition, the rest of the sequence (5, 1, 3) is also appropriate.

Written Comprehension questions - 3 and 4.

3. C is the correct answer. As stated in the passage, "The owner of the home had reported a burglary...**AND**... the suspects were in the home when he and his wife arrived home."

Although the information in the passage does not indicate the exact number and type of items taken from the Corneal home, Officers Lucas and Gentry did determine that the suspects concentrated their efforts on the exotic gun collection, the antique jewelry collection and the areas of the house that typically contain money.

A- is incorrect, because it states that nothing was stolen;

B- is incorrect, because the wrong items are listed;

D- is incorrect, because it states specific numbers of items stolen which were not stated in the passage.

4. A is the correct answer. Officer Reigner was the officer who "requested the names of the companies and the services they performed."

B- is incorrect, Mr. Corneal seemed to answer all of the officers' questions.

C- is incorrect, because Officers Lucas and Gentry searched the home. Officer Baker assisted with questioning Mr. Corneal.

D- is also incorrect, the suspects fled the scene in a dark blue sedan, not a dark blue van.

Problem Sensitivity questions - 5 and 6.

5. B is the correct answer. The driver submitted to the blood alcohol test and scored below the legal limit. According to guideline 3, "the driver's license SHALL NOT be confiscated." Officer Kelley did take the license and that was problematic.
- A- is incorrect, given the fact there was a problem with the license (response B).
- C- is incorrect, because the original guidelines did not mention that it was necessary to have someone witness the field tests.
- D- is incorrect, because (according to guideline 4) even if a driver passes the blood alcohol test, "the driver can still be charged with driving under the influence, if the officer can justify the charge through the use of field tests." Officer Kelley did base the charge on the results of the field tests.
6. A is the correct answer, because the only inconsistency between the various descriptions was provided by witness 1. Specifically, witnesses 2, 3 and 4 stated that the second robber's face was hidden by a ski mask/stocking cap. Witness 1 not only failed to mention the mask, but also was the only witness who claimed that this suspect had blonde hair. All other details were confirmed by at least two of the four witnesses.

Deductive Reasoning questions - 7 and 8.

7. C is the correct answer. According to the fourth example listed under offenses, any situation involving hostages would require backup.
- A- does not require backup because the crime was not reported within 30 minutes as indicated by the second example listed under offenses.
- B- does not require backup because the motorist traveled 30 mph under the speed limit. Backup would be required if the motorist traveled 30 mph over the speed limit as indicated by the first example listed under offenses.
- D- does not require backup because the accident was not fatal as indicated by the third example listed under offenses.
8. A is the correct answer. Based on the six guidelines, the Captain's work assignment, the date and temperature, Captain Cross may wear either the Eisenhower Jacket or the Double Breasted Blouse, a white, long sleeve shirt, and regulation trousers with either the black trouser braid or stripe.
- B- is incorrect, because according to guideline 3, a Captain "will substitute a white shirt" for the navy blue, long sleeve shirt.
- C- is incorrect, because according to guideline 1, it is too early in the year (September) and too warm (60 degrees) to wear the Antron Jacket.
- D- is incorrect, because according to guidelines 4 and 5, the Captain cannot wear the short sleeve shirt because the temperature is too cold (60 degrees) and the Captain is serving outside duty.

Inductive Reasoning questions - 9 and 10.

9. When examining the alternatives, they include the section of the city and time of day. There is no indication of the day of the week. Thus, the information provided in paragraph 3 is irrelevant in responding to this question. According to the first two paragraphs, assaults occur "in the eastern and northern sections" and "between 7 p.m. and 9 p.m. **OR** between 11 p.m. and 4 a.m."

D is the correct answer. It includes both an appropriate section of the city and time of day.

C- is incorrect, because it includes the wrong section of the city for assaults.

A and B- are incorrect, because they do not include any hours of the day when assaults typically occur.

10. A is the correct answer. To answer this question it is helpful to compare the physical characteristics of the suspects in incidents 1, 2, 3 and 5 (4 is not one of the alternatives provided) and for the suspect in incident 6. Using this method, the other three answers can be eliminated.

B- is incorrect, because the suspect's only tattoo is on the left hand, not on the bicep. Since this suspect was wearing a tank top, a cobra tattoo on the arm would be hard to miss.

C- is incorrect, because the suspect's tattoos are on the forearms, not on the bicep.

D- is incorrect, because the suspect is too tall and heavy (6'7" and 230 pounds).

Information Ordering questions - 11 and 12.

11. The correct answer is A. The key phrase in this question is "notices a pattern emerging." Step 5 reads "If a light pattern shows up,... the next step is to...brush more powder into the pattern lightly with the flow of the ridges."

B, C and D- are incorrect because they correspond to procedures 4, 3 and 7, respectively.

12. The correct answer is B. To determine the correct answer, the steps must be listed in the correct time sequence. Steps 2, 3 and 5 deal with the preparation for the search and steps 1, 4 and 6 deal with conducting the search. In terms of the last three steps, 6 must be first, because it instructs the officer to "start at the forehead." Step 1 must be next because it states "Lower both of your hands to the base of the prisoner's neck and proceed..." Step 4 is a continuation of step 1, since you finish 1 at the mid-section and begin 4 at the waistline. Answer B is the only one ending with the sequence 6, 1, 4 AND the order for the initial three steps (3, 2, 5) is appropriate.

PART II: PHYSICAL TEST (PT)

SECTION I: SUMMARY OF PT

A. General Description

The DSP Physical Test (PT) is designed to assess a candidate's capacity to perform the tasks ordinarily performed by a trooper while on the job. This is accomplished by requiring the candidate to perform activities which evaluate the body's physiological systems known to underlie the effective performance of a DSP Trooper. The fitness program presented in this Guide provides candidates with the information they need to improve their level of physical fitness by conditioning the individual muscles and muscle groups involved in the tasks performed by troopers.

B. DSP Entry-Level Trooper PT

Candidates are advised of the following:

- Wear clothing appropriate for physically demanding work.
- You must wear sneakers or rubber soled shoes.
- You may wear gloves and/or kneepads, however, these items WILL NOT be provided. You must bring your own gloves and kneepads if you want to wear them.
- Candidates may not use any extraneous piece of equipment (e.g., harnesses, straps) that they bring with them to help perform an event. They may only use the material and equipment provided for the test event. However, personal safety devices (e.g., knee brace, ankle brace) will be allowed, but they WILL NOT be provided.

Because the PT is physically demanding, it is suggested that you refrain from eating at least two hours before the test. However, you are urged to drink plenty of fluids beginning the day before the test and continuing up until the time you are tested. Avoid drinking caffeinated beverages. You are also advised to stretch and warm-up before participating in the test.

The DSP PT will consist of 3 separate events. Each event evaluates abilities necessary to successfully perform the physical demands of a DSP Trooper. In general terms, the three events test your cardiorespiratory endurance, upper body strength and endurance, and abdominal muscle strength and endurance. All three events will be timed. Your final score for each event will be pass or fail. You must complete and pass all three events to remain in consideration for a position with the DSP. The three events are described below.

1. **60-Second Push-up Test** – This event assesses muscular endurance of your upper body (e.g., anterior deltoid, pectoralis major, triceps). You will be asked to take a push-up position on the floor with your hands placed slightly wider than shoulder width apart with your fingers pointing forward. An administrator will place a fist on the floor below your chest. If the administrator is a male and you are a female, a 3-inch sponge will be placed under your sternum to substitute for the fist. Starting in the up position (elbows extended) with your back straight you will be required to lower your body to the floor until your chest touches the administrator's fist or the sponge. You will then be required to return to the up position. This will count as one repetition. Female candidates will perform modified push-ups. The modified push-up will be performed on the hands and knees with the back straight and hands slightly in front of the shoulders in the up position. Your score for this event will be based on the number of correctly performed push-ups in one minute.

NOTE: You should breathe normally during the test and should not hold your breath at any time.

NOTE: Any resting should be done in the up position.

NOTE: You will be required to keep your back straight at all times.

NOTE: You should (but are not required to) perform a short warm-up prior to this test. Chest stretches are recommended along with such stretches as arm circles, shoulder stretch, etc.

2. **60-Second Sit-up Test** – This event provides an assessment of abdominal muscular endurance. You will be asked to lie on your back, knees bent, heels flat on the floor, with your hands cupped over or behind your ears. Your buttocks must remain on the floor with no thrusting of the hips. Your feet will be held by a partner to keep them flat on the floor. A complete sit-up requires you to raise your upper body, touch your elbows to your knees, and then return until your shoulder blades touch the floor. Your score for this event will be based on the number of correctly performed sit-ups in one minute.

NOTE: You should breathe normally during the test and should not hold your breath at any time.

NOTE: Any resting should be done in the up position.

NOTE: Neck should remain in the neutral position. Do not pull on the head or neck.

NOTE: You should (but are not required to) perform a short warm-up prior to this test. Trunk stretches are recommended along with such stretches as bent arm hang, seated toe touches, etc.

3. **Aerobic Fitness Test** – This event provides an assessment of your cardiorespiratory endurance. The event consists of a timed, one and one-half mile run around track. You will be required to cover the course quickly, since your speed will determine your score. However, you must keep in mind that DSP Troopers perform their duties in a way that is quick and efficient without risking unnecessary injuries. Your score for this event will be based on the total elapsed time from when you start the course until you have crossed the 1.5-mile marker.

NOTE: You should (but are not required to) perform a short warm-up prior to this test, including brisk walking, running in place, and various leg stretches.

SECTION II: PREPARING TO BEGIN A FITNESS PROGRAM

A. Medical and General Health Factors

Health Screening for Physical Activity¹

To optimize your safety during the PT and fitness program in preparation for the PT, we recommend that you participate in screening for important medical and health factors. The objectives of this type of pre-participation screening include:

- Identifying those candidates who have medical conditions that would either be aggravated by exercise, or pose an immediate risk when coupled with exercise,
- Identifying those candidates who have signs and symptoms that suggest a problem, or risk factors for diseases that should receive further medical evaluation before participating in a fitness program or the PT, and
- Identifying those candidates who may have special exercise requirements or who should take special precautions prior to exercising. For example, taking a diuretic (water pill) for moderate hypertension means that you should take care to drink extra fluid before, during, and after exercise.

It is not necessary for everyone to get a thorough physical examination prior to starting a fitness program. Such a requirement is not scientifically necessary, cost-effective, or time-efficient; however, if going to your physician would make you feel better about beginning a fitness program, by all means do so.

The Physical Activity Readiness Questionnaire (PAR-Q) is recommended as a minimal standard for screening prior to beginning a fitness program or, if some activity is already underway, prior to exercising more vigorously. The PAR-Q is designed to identify the small number of adults for whom physical activity might be inappropriate and those who should have medical clearance prior to exercise and testing.

¹Portions of the following are adapted from the American College of Sports Medicine, *Guidelines for Exercise Testing and Prescription*, 5th edition, Williams and Wilkins, Baltimore, 1995, with the permission of the editor.

Physical Activity Readiness Questionnaire (PAR-Q)²

1. Has a doctor ever said you have a heart condition and recommended only medically supervised physical activity?	YES	NO
2. Do you have chest pain brought on by physical activity?	YES	NO
3. Have you developed chest pain within the last month?	YES	NO
4. Do you tend to lose consciousness or fall as a result of dizziness?	YES	NO
5. Do you have a bone or joint problem that could be aggravated by the proposed physical activity?	YES	NO
6. Has a doctor ever recommended medication for your blood pressure or a heart condition?	YES	NO
7. Are you aware, through your own experience or a doctor's advice, of any other physical reason why you should avoid exercising without medical supervision?	YES	NO

If you answered YES to any of these seven questions, vigorous exercise and physical testing should be postponed until medical clearance is obtained.

Question number seven of the PAR-Q is an open-ended question which covers medical and physical problems which make further medical screening necessary. Many individuals may question whether certain conditions are important enough or severe enough to warrant seeing their doctor. The next table provides additional information, including an indication of signs and symptoms suggestive of underlying diseases, risk factors for heart disease which in combination, suggest the need for medical screening, and a list of conditions which may increase the risk of complications during exercise.

²From: Thomas, S., J. Reading, and R.J. Shephard. *Revision of the Physical Activity Readiness Questionnaire (PAR-Q)*. Canadian Journal of Sport Science 17:338-345, 1992.

Signs or Symptoms of Underlying Risk Factors

1. Major Signs or Symptoms which Suggest Heart, Lung, or Metabolic Disease:

- Pain, discomfort or numbness in the chest, arm, jaw, neck or back
- Unaccustomed shortness of breath or shortness of breath with mild exertion
- Difficult or painful breathing
- Ankle swelling
- Palpitations or racing heart rate
- Leg pain
- Known heart murmur

If you have any of these symptoms, vigorous exercise or physical testing should be postponed until medical clearance is obtained.

2. Major Heart Disease Risk Factors:

- Systolic blood pressure ≥ 160 mmHg or diastolic blood pressure ≥ 90 mmHg (measured on at least 2 separate occasions)
- Serum cholesterol ≥ 240 mg/dl
- Cigarette smoking
- Family history of heart disease or stroke in parents or siblings prior to age 55

If you have two or more of these risk factors, vigorous exercise or physical testing should be postponed until medical clearance is obtained.

3. Diabetics who:

- take insulin
- have had diabetes for more than 15 years
- who do not take insulin but are over 35 years of age

should get medical clearance prior to beginning a fitness program.

4. It is also recommended that men over the age of 40 and women over the age of 50 have a physical examination prior to beginning a vigorous fitness program. "Vigorous" means that the amount of exercise represents a challenge and will result in fatigue within 20 minutes. Healthy persons of any age can begin a low intensity fitness program without physician clearance, provided that the above conditions are adhered to.

No set of guidelines can cover every conceivable situation. In general, if you know that you have a problem or disease, see your physician first. Some other conditions which indicate a need for medical screening include alcoholism, drug use or abuse, problems with dehydration or an inability to tolerate heat, and acute infections (including severe colds and flu symptoms). Pregnant women, or women who think they may be pregnant, should consult a physician prior to beginning a fitness program even if they have been physically active prior to the pregnancy.

Smoking

Inhaled smoke has been linked to lung cancer, lung disorders, and coronary heart disease. Smoking also affects a person's ability to perform aerobic tasks. The same mechanisms that eventually lead to lung disorders limit the ability of the lungs to take in air and distribute oxygen to the blood. This ability is particularly crucial when performing tasks that involve large muscle groups continually contracting for several minutes or longer. A candidate who smokes may be specifically affected in his or her ability to climb stairs or walk or run for any length of time. A smoker may not be able to do as well on an event that involves this type of activity as a non-smoker of similar size, ability and training. Therefore, in order to maximize their potential to do well on the PT, candidates who smoke are urged to quit smoking as soon as possible.

Weight Control

Carrying excess weight will reduce a candidate's performance potential on the PT. Excess weight increases the work that the muscles, heart, and lungs have to do when performing tasks. For example, when an overweight person walks up stairs, the leg muscles have to lift more weight. The heart also has to pump more blood to those working muscles, putting additional stress on the heart. When muscles have to work harder, against the stress of carrying excess weight, injuries can occur ranging from pulled leg muscles to a heart attack.

In an effort to promote safety and optimal health, it is recommended that overweight candidates try to lose weight before participating in the PT. To best accomplish this, overweight candidates should begin a weight reduction program that contains nutrition and an exercise component. Weight loss can best be achieved by: (a) decreasing the amount of food you normally eat through the reduction of portion sizes, (b) changing a few "bad habits" such as the amount of high fat food selections you make, and (c) increasing the amount of exercise you are presently getting.

1. Through reduction of food intake. A successful weight loss program always includes an eating plan designed to provide the right amount of vitamins, minerals and calories to avoid hunger pangs and any possible nutrient deficiencies. Nutritionists suggest the following method to assess your current caloric intake and to appropriately cut back calories. To determine your current caloric intake:

Multiply your present weight by the number 15.

The answer is the average number of calories you are eating daily to maintain your current body weight. The number 15 is used because it takes approximately 15 calories to maintain one pound of body weight.

Now that you know the average number of calories you're eating, to lose weight, you need to reduce this amount by between 500-1000 calories per day. To demonstrate the effect of reducing your caloric intake, look at the following examples:

EXAMPLES:

- 3500 calories = 1 pound of body weight
- 500 calories x 7 days a week = 3500 calories (1 pound)
- 1000 calories x 7 days a week = 7000 calories (2 pounds)

By cutting back 500 calories per day, you will be able to lose approximately 1 pound of body weight per week. Cutting back 1000 calories per day allows you to lose approximately 2 pounds of body weight per week. Losing any more than 2-3 pounds of body weight in one week could be detrimental to your health and also increases the chances of gaining the weight back more quickly. So, go slowly and steadily.

Some people will lose less than a pound in one week and perhaps 2 pounds the next. There often is no clear way to gauge weight loss, but be confident that if you're cutting back on calories, you will definitely see a difference over the long haul.

2. Through exercise. An exercise program is also a key component of losing weight and keeping it off. For example, if you don't want to cut your calories by 1000 per day but still want to lose 2 pounds per week, you can cut calories by 500 and increase exercise to burn 500 calories through energy expenditure. The results will be the same...a 2 pound weight loss. Here are some examples of ways to burn roughly 500 calories through energy expenditure:

EXAMPLES:

- walk 5 miles (takes 100 minutes)
- jog 5 miles (takes about 55 minutes)
- climb stairs for 80 minutes
- cycle or row for 60 minutes

3. Through appropriate food selection. Now that you realize some of your weight loss options, the next step is to select appropriate foods. The first goal should be to identify the foods you're currently eating that are too high in fat. Some examples might include:

EXAMPLES:

- peanut butter
- ice cream
- butter or margarine on toast, vegetables, popcorn, potatoes, etc.
- large amounts of meats and their skins
- fried foods such as french fries, fried chicken, fried eggs, etc.
- cheese, sour cream, cream cheese, mayonnaise, salad dressings
- high fat desserts such as cookies, pies, cakes, pastries and donuts
- fatty meats such as ribs
- oils

Although fat is an essential nutrient, you need to be careful not to eat too much of it. You should only get about 20-30 percent of your total daily calories from fat. But rather than try to calculate what that number should be, your goal should be to cut back as much as possible.

Your next step is to assess how many fruits and vegetables you are eating. The recommended number of fruits is 2-4 pieces per day (or 2-4 cups of canned fruit in its own juice). Vegetables can be eaten cooked or raw to total 2-4 cups per day. In many cases, vegetables can be eaten in any quantity due to their very low calorie content. Finally, assess how many foods you eat from the grain, cereal, and bread category. It is recommended that the majority of food you eat in a day come from these foods, 6-11 servings per day. Examples include:

EXAMPLES:

- rice
- pasta/noodles
- potatoes, corn, peas, dried beans such as navy, pinto, garbanzo and black beans
- all types of bread, bagels, muffins
- all types of cereal
- cornmeal
- stuffing
- sweet potatoes, squash, yams

These foods are referred to as complex carbohydrates. They are responsible for providing you with the most available form of energy, glucose. Consequently, your diet needs to be plentiful in them, yet you can still lose weight due to their typical high fiber content.

Protein rich foods should be treated with care. Only 12-15% of your total daily calories need to come from protein rich foods such as meat, eggs, milk, yogurt, and other dairy products. Look for lean meats; remove skin from chicken and fish; trim all fat off meat; and select skim milk, nonfat yogurt, and lower fat cheeses, such as mozzarella.

An example of a nutrient balanced eating plan that can be adapted to your desired caloric intake appears on the following page.

SAMPLE EATING PLAN

Breakfast

- 1-2 cups of cereal (a high fiber one is best, but any will do)
- 1 cup of skim milk
- 1 piece of fruit (any kind)
- 1-2 slices of toast or a bagel or English muffin with jam or jelly (no butter)

Snack

- 1 piece of fruit (any kind)

Lunch

- 1 sandwich made with:
 - 2 slices whole wheat bread,
 - 3-4 ounces of turkey, or chicken, or fish
 - mustard and no mayo
 - tomatoes, lettuce, pickles
- a bag of raw vegetables including carrots, celery, broccoli, cauliflower
- 1 piece of fruit (any kind)
- 1 cup of low fat or nonfat yogurt
- 1 small bag of pretzels
- a non-caloric beverage of your choice, or water

Snack

- pretzels (small bag), fruit, vegetables, or yogurt

Dinner

- 5-6 ounces of meat of your choice
- a potato or 2 cups of rice or 2 cups of pasta or 2 slices of bread
- any amount of vegetables without butter or margarine on them
- 1 piece of fruit
- 8 ounces of skim milk or 8 ounces of nonfat yogurt

Note: Additional calories may be obtained from other low fat sources.

Meal Planning

Always eat three regular size meals as shown in the Sample Eating Plan, or six small meals every day. The purpose behind this advice is two-fold. First, you spread your calories throughout the day allowing adequate blood sugar for energy. Second, by eating periodically, you are never "starving." By withholding calories by skipping a meal, you allow your blood sugar to drop so low that your body will crave high fat, high sugar calories causing you to eat candy bars and other immediate sweets to satisfy the craving. You can prevent this by eating regularly.

Select foods that contain carbohydrate, protein, and fat for each meal. Since carbohydrates empty from the stomach the quickest, providing excellent and immediate energy, they should be the largest part of any meal. Protein is the next nutrient to leave the stomach and fat the last. Both of these nutrients help keep you feeling full for a longer period of time since they stay in the stomach longer.

There are many misconceptions and fallacies about diets and exercise. The truth about some of the most common misconceptions is discussed below:

1. **FALSE:** *Exercise will increase your appetite.*

Exercise does not increase your appetite. In fact, it can actually act as an appetite suppressant. In other words, it may decrease your appetite. Exercise also serves to stimulate metabolic rate, or the rate you burn calories, after exercise is over.

2. **FALSE:** *A lot of extra weight is "water-weight," and you can lose weight by sweating or drinking less fluid.*

Exercising in rubber suits, in saunas or steam rooms will only increase your loss of body water and dehydrate you, giving you a "false sense" of weight loss. Dehydration is not an effective way to lose weight. Since the body is made up of 70% water, it makes sense to drink plenty of fluids each day to maintain proper fluid balance. We lose body fluids, without really knowing it, through our skin as well as through sweating. Weighing yourself after exercise and seeing a decrease in body weight is not an appropriate way to assess true weight loss. You need to drink fluids to replace lost water. In fact, you should drink a little more water than what quenches your thirst to fully prevent dehydration.

3. **FALSE:** *Fad diets and gimmicky exercise programs are effective.*

You cannot lose body fat unless you decrease total calories (not just fat calories).

4. **FALSE:** *Dieting is a short-term way to lose weight.*

The concept of "diet" typically implies some form of eating plan that you will follow for a short period of time. Consider the fact that the body has a set number of fat cells that NEVER die until the day that you do. Consequently, losing weight by changing eating habits must be continued to maintain lost weight. By "going off the diet" you will inevitably gain back the lost weight. So concentrate on changing your few bad habits slowly and permanently, and include exercise.

5. **FALSE:** *Quick-reducing diets are effective.*

Diets that promise rapid weight loss are typically short-term programs. When you lose more than 2-3 pounds per week, you are not only losing fat, but also muscle mass and water. As soon as the low calorie diet, quick weight loss scheme wears you down, you'll revert back to your more pleasant way of eating and gain all the lost weight back and, typically, more.

6. **FALSE:** *You can spot reduce in specific areas of your body.*

You cannot "spot-reduce." In other words, by cutting back on your calories, you cannot specify where the changes in body reduction will occur. However, by exercising specific body parts, you can effectively strengthen certain muscle groups to give you a leaner, stronger look, but fat does not selectively disappear from those areas.

Three factors play key roles in determining weight loss in any given individual. The first is heredity. If you were born to overweight parents, you have a predisposition to being overweight. As a result, your ability to lose weight easily may be somewhat impaired due to your genetics. Secondly, environment plays a big role. What kinds of foods do you keep in the house, where do you socialize and does socialization usually mean food? Third, what is your activity level? Are you typically a more sedentary person? Try watching less television and work on more projects in the evening. Do you snack while sitting around? Try more movement in general. Think about where you can fit exercise in.

In conclusion, successful, long-term weight loss involves many factors. Cutting back calories is critical to weight loss but it won't make you more fit or promote long-term weight management. That's where exercise fits in. The combination is the right approach. Set some realistic goals (1-2 lbs. per week) for weight loss through a change in eating habits and increased exercise. Keep food records to accurately assess what you are eating. Write down everything you eat for about a week and assess where you think some changes could reasonably be made. Keep an activity log. Strive for adding a few extra minutes of activity periodically until you reach 30-40 minutes of exercise a day.

B. Principles of Training

Terms

Some of the terms used in the fitness program presented in this Guide are explained below, as are some of the principles upon which this fitness program is based. (Sharkey, 1979)

Physical Fitness

Physical fitness is defined as "the ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies" (President's Council on Physical Fitness and Sports). An adequate level of physical fitness is required to perform many jobs, to provide energy for recreational activities, and to help avoid some diseases (such as heart disease and osteoporosis). Physical fitness consists of the following components: cardiovascular fitness, muscle strength, muscular endurance and flexibility. In order to perform optimally at work and in our other daily activities it is necessary to develop and maintain adequate levels of fitness in each of these components. The fitness program presented in this Guide is designed to develop all components of fitness because they are essential to performing the trooper's job and in maintaining good overall health.

Cardiovascular fitness (aerobic endurance, stamina) is a measure of heart and lung function. It is the ability to maintain whole body activity for a length of time without fatiguing or running out of breath. An adequate level of cardiovascular fitness is also associated with decreased mortality from many diseases.

Muscle strength (also referred to in this Guide simply as "strength") is a measure of the greatest amount of force a muscle can apply; that is, the most weight a muscle group can move one time. In addition to its importance in many job-related tasks, improving muscular strength also helps prevent injuries to muscles and makes bones and tendons stronger.

Muscular endurance is a measure of a muscle's ability to maintain a submaximal force or repeatedly apply a submaximal force without a rest; that is, the number of times you can lift a certain amount of weight. Adequate levels of muscular endurance allow your muscles to perform a task for a longer period of time before the muscles get tired. Poor endurance of the back and abdominal muscles has been implicated as the cause of much of the low back pain suffered by American adults.

Flexibility is a measure of the range of motion at a joint. Adequate levels of flexibility are necessary in order to make daily movements with ease and to help prevent injuries to muscles and joints. In addition, there is evidence to suggest that inadequate flexibility of the back and legs is related to low back pain.

Adaptation

The stress of repeated exercise produces changes in the body that are called training effects. Your body undergoes some changes in structure and function that allow it to respond better to the demands of physical work and exercise. The body adapts to the extra demands imposed by training by undergoing the following changes:

- Heart function and circulation are improved.
- Blood pressure and cholesterol levels are improved.
- Muscle strength and muscular endurance are improved.
- Muscle mass increases and the portion of weight made up of fat decreases.

Training consists of exercising specific muscles or muscle groups and stressing different systems of the body. It involves having the muscle or muscles apply and maintain a force for a short time and/or repeatedly. Calisthenics, weight training, stretching, and aerobic activity are all important training methods that will result in adaptations that will enable the body to perform more effectively. The rate of improvement or adaptation is related to the following:

- Frequency of activity (the number of times you train per week).
- Intensity of activity (how hard you train).
- Duration of training (the length of each training session).
- Your initial fitness level.

Overload

For improvement in fitness level to take place via adaptation, a part of the body must be subjected to more than it is accustomed to. For example, in order for muscle strength to improve, the muscles must apply a greater force than they normally would apply during regular daily activities. This increase in intensity of force, or overload, elicits an adaptation. Increasing the duration of an activity would also be an overload. As the body adapts to an increased load, more load must be added to continue adaptation.

Specificity

The body adapts very specifically to the type of training it receives. The type of training must be related to the desired results or to the purpose of the training. Aerobic activity will cause very different body adaptations than will weight training. Thus, heavy weight training is of little value for cardiovascular endurance, and a lot of running is not particularly useful for developing upper body strength. In addition, adaptations are specific to the muscle groups that are trained. Thus, stretching the shoulder muscles in order to improve shoulder flexibility will not improve flexibility at any other joint, nor will it improve strength of the shoulder muscles. Performance of an activity improves when the training is applied to the same muscle groups as are used in the activity and in the same way they are used in that activity.

One exception to this specificity principle is cardiovascular endurance. The heart-lung system involved in cardiovascular endurance is vital in all activities that require large muscle groups to be active for any length of time. The specific activity used to train the cardiovascular system is, therefore, not critical, unless one is competing in athletic events.

Use and Disuse

The body needs activity and does not "wear out." Lack of activity results in weak muscles, including the heart, poor circulation, shortness of breath, increased body fat, and weakening of bones and connective tissue. Regular activity results in good muscle tone, a strong heart, good circulation, endurance, and strong bones and connective tissue (ligaments, tendons, etc.).

Individual Response

Individuals respond differently to the same fitness program. The differences in response may be the result of any of the following factors: heredity, physical maturity, state of nutrition, habits of rest and sleep, level of fitness, personal habits such as smoking and alcohol intake, level of motivation, the environment, and the influence of physical disability, disease, or injury.

Warm-up

Warm-up is a gradual increase in intensity of physical activity and should always precede strenuous activity. A 5-10 minute warm-up period allows an individual to:

- Mentally prepare for exercising.
- Increase body temperature slowly.
- Stretch the muscles and joints.
- Increase heart rate and breathing gradually.

Warm-up consists of low intensity aerobic activity such as walking or slow jogging, followed by calisthenics and light stretching.

Stretching

Muscle groups should be stretched in order to improve flexibility at a joint. Stretching exercises should be performed slowly and gently, without any bouncing, bobbing, jerking or lunging. Stretching exercises can be performed as part of the warm-up, following 5 minutes of low intensity aerobic activity, or as part of the cool-down phase.

Calisthenics

Calisthenics are exercises that can be performed without equipment, although hand or ankle weights may be used. These types of exercises can be used to develop strength, muscular endurance, and flexibility. Calisthenics usually involve the repetitive lifting and lowering of a body segment as in push-ups, curl-ups, and arm circles.

Weight Training

Weight training consists of exercises that involve moving a weight that is external to the body. Such exercises are used to develop strength, muscular endurance, and (sometimes) flexibility. Particular care must be taken if free weights (e.g., barbells) are used in weight training. They may cause injury if they fall or if undue strain occurs in trying to control the weight (e.g., to keep it from falling). This can happen as a result of hands slipping, if a person attempts to lift a weight that is too heavy for him/her to support, or if poor technique is used. For these reasons, weight machines may be safer for novices to use in weight training. If you use free weights for weight training, be sure to always work with a partner who can assist you.

Aerobic Training

Aerobic training improves cardiovascular fitness. The training of the cardiovascular system is accomplished by continuous rhythmical motion over time, using large muscle groups. Jogging, bicycling, stair climbing, rowing, walking, swimming, hiking, cross-country skiing, skating, and aerobic dancing are good activities for aerobic training.

Cool-down

The cool-down phase is as critical as the warm-up phase and should last 5-10 minutes. This phase of activity is important for the following reasons:

- It allows the heart rate to decrease gradually.
- Continued activity maintains adequate circulation, prevents pooling of blood, and hastens recovery.
- It provides a time for thorough stretching and relaxation activity.

Cooling down consists of slowing down your activity, walking, light calisthenics and stretching exercises.

Unusual Reactions

If, during or immediately after exercise, you have any of the following reactions, stop exercising immediately and consult a physician as soon as possible:

- Labored or difficult breathing (not the deep breathing normally associated with exercise)
- Loss of coordination
- Dizziness
- Tightness in the chest
- Sharp pain in any muscle or joint
- Numbness

C. Assessing Your Current Level of Fitness

This section contains instructions for a simple fitness test that you can use to assess your current level of fitness. Take the test now, before you begin the fitness program included in this Guide, to determine your current level of fitness. Also, take the test at several intervals while you are participating in the fitness program before the PT to measure your progress.

The events described in the fitness test are related to the events you will be asked to perform during the physical test. Curl-ups, and push-ups measure strength and muscular endurance. A 1.5-mile run measures cardiovascular fitness.

Keep a record of your results each time you complete the test. Do not be concerned about how your results compare to others who may be taking the examination. Use your results to monitor your progress, to provide motivation, to establish goals, and to determine the effectiveness of the fitness program.

Here is a list of the equipment and facilities you will need to conduct the fitness test.

- Stop watch
- 1.5-mile measured distance (a high school track or measured running path)
- Scale to measure body weight
- Score Sheet (included within this Guide on page 62)

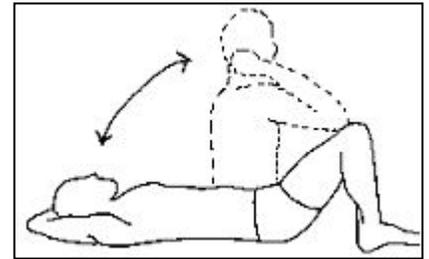
Fitness Test Descriptions and Instructions

Before beginning the fitness test, do five to ten minutes of warm-up. See the warm-up section of the Guide for suggested exercises.

1. Sit-Ups

This test measures abdominal muscular endurance

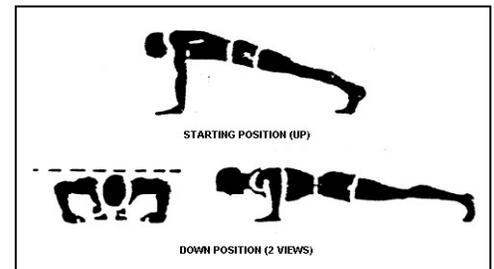
1. The subject starts by lying on the back, knees bent, heels flat on the floor, with the hands cupped over or behind the ears. Avoid pulling on the head with the hands. The buttocks must remain on the floor with no thrusting of the hips.
2. A partner holds feet down firmly
3. The subject then performs as many correct sit-ups as possible in one minute.
4. In the up position, the individual should touch elbows to knees and then return until the shoulder blades touch the floor.
5. Score is the total number of correct sit-ups. Any resting should be done in the up position.
6. Breathing should be as normal as possible, making sure the subject does not hold their breath as in the Valsalva maneuver.
7. Neck remains in the neutral position
8. Do not pull on the head or neck.



2. Push-Ups

This test measures muscular endurance of the upper body (anterior deltoid, pectoralis major, triceps)

1. The hands are placed slightly wider than shoulder width apart, with fingers pointing forward. The administer places one fist on the floor below the subject's chest. If a male is testing a female, a 3-inch sponge should be placed under the sternum to substitute for the fist.
2. Starting from the up position (elbows extended), the subject must keep the back straight at all times and lower the body to the floor until the chest touches the ad minister's fist. The subject then returns to the up position. This is one repetition. The modified push up is performed on the hands and knees with the back straight and hands slightly in front of the shoulders in the up position.
3. Resting should be done in the up position.
4. The total number of correct push ups in 1 minute is recorded as the score.



3. 1.5 Mile Run

Determine the starting and end point for a 1.5-mile distance. Run and/or walk as fast as you can to cover this distance. Record the time it takes to complete the 1.5-mile distance.

FITNESS TEST SCORE SHEET

Date of Test #1: _____ Body Weight: _____
Date of Test #2: _____ Body Weight: _____
Date of Test #3: _____ Body Weight: _____

	Test #1	Test #2	Test #3
STRENGTH AND MUSCULAR ENDURANCE			
Sit-Ups (number)			
Push-Ups (number)			
CARDIOVASCULAR FITNESS			
1.5 Mile Run (time)			

SECTION III: FITNESS PROGRAM

A. General Directions for Fitness Program

The fitness program is divided into the following sections:

- Warm-up
- Strength and Muscular Endurance Exercises (Calisthenics and Weight Training)
- Aerobic Training Exercises
- Cool-down

The strength and muscular endurance exercises do not have to be done on the same day or during the same exercise session as the aerobic training exercises. In other words, they may be done on separate days or at different times on the same day. However, every exercise session should be preceded by a warm-up period and followed by a cool-down period. For example, if the strength and muscular endurance exercises are done on the same day but at a different time than the aerobic training exercises, warm-up and cool-down exercises should be performed before and after each of the two exercise sessions.

The warm-up exercises are designed not only to get a person physically and mentally ready for the muscular and/or aerobic training exercises, but also to help develop flexibility in various joints. The strength and muscular endurance exercises can be done in one of two ways, depending on the availability of equipment. Some degree of strength and muscular endurance can be developed by doing calisthenics which require little or no equipment but is more typically accomplished by training with weights. Training with weights can be done either by using free weights, such as barbells, or by using weight machines, for example, "Universal" or "Nautilus" systems. Once you start a program using a particular method for strength and muscular endurance exercises, you should continue that program for the duration of the training period for comparative purposes.

Since there are no equipment requirements for the aerobic training exercises, the same program can and should be followed by everyone regardless of the type of program (i.e., calisthenics vs. weight training) chosen to develop strength and muscular endurance. A weekly log sheet is provided so that candidates can keep track of their progress in developing strength, muscular endurance, and cardiovascular fitness. Two types of log sheets are provided, one for calisthenics and aerobics (for those individuals who use calisthenics to train for strength and muscular endurance), and one for weight training and aerobics (for those individuals who use weights to train for strength and muscular endurance). Of course, candidates should use the log sheet that is designed for the particular fitness program they have chosen to follow. Copies of the log sheet will have to be made for each week that you participate in the fitness program.

Training for the Physical Test

The sections that follow describe the exercises that you can perform to develop the four categories of fitness identified previously. The Warm-up section describes the warm-up exercises which are useful for the development of flexibility, and are an essential component of any fitness program. The Calisthenics and Weight Training sections describe the calisthenics and weight training exercises that can be used toward the development of strength and muscular endurance. The Aerobic Training section describes a program aimed at enhancing cardiovascular fitness. Finally, the Cool-down section, provides cool-down exercises which will aid in recovery from exercise, help develop flexibility, and are an important component of any fitness program.

B. Warm-Up

The warm-up exercises should be performed for 5-10 minutes. The whole set of stretches described in this section of the Guide should be performed before each exercise session. If the strength and muscular endurance exercises are performed on different days or at different times of the day than the aerobic exercises, the warm-up exercises should be performed before each separate session.

Each stretch should be performed in a slow manner. Move to the point that a stretch, not pain, is felt in the muscles. Hold that position for 10-20 seconds. Repeat each stretch 3-5 times.

Several traditional stretches are listed below. These stretches should be avoided because they may lead to injury. More effective stretches are listed and explained in this section of the Guide.

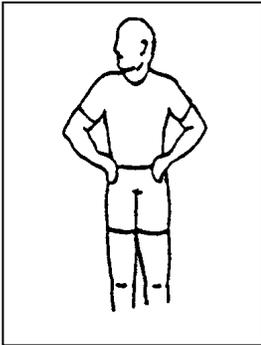
DO NOT DO THESE STRETCHES

- Standing Toe Touch with Knees Locked
- Hurdler Stretch
- The Plow or Backover
- Full Neck Circles
- Back Hyperextension or Cobra
- Back Bends

Warm-up Stretch Descriptions

The following stretches are effective for improving flexibility in each muscle group. Begin the warm-up period by performing light aerobic activity, such as stepping or jogging in place and arm circles.

1. Side-to-Side Look



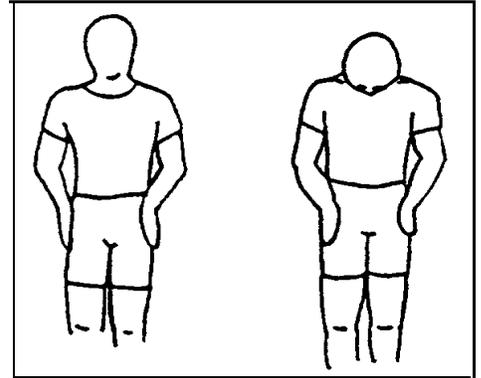
Stretches your neck muscles

Slowly turn your head and look to the right, then slowly turn your head back to the center then slowly turn your head and look to the left.

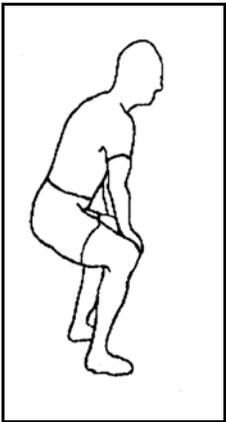
2. Forward and Down Look

Stretches your neck muscles.

Slowly look downward. Do not put your chin on your chest.



3. Standing Cat Stretch



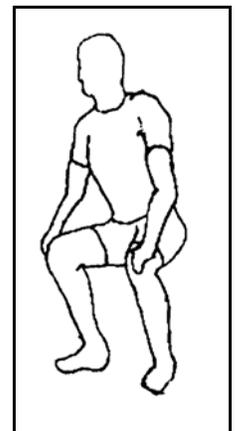
Stretches your upper and lower back.

Stand with your feet slightly wider than shoulder-width apart. Keep your knees bent. Hinge forward at your hips and place your hands just above your knees. Do not bend at your waist. Begin with your back straight and flat, arch your back by pulling in with abdominals and curl your chin towards your chest. Return to the flat back position. Do not arch your back down past the flat back position.

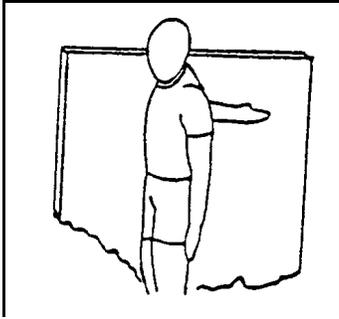
4. Shoulder Turn

Stretches your lower back.

Stand with your feet slightly wider than shoulder-width apart. Keep your knees bent. Hinge forward at your hips and place your hands just above your knees. Do not bend at your waist. With your back straight and flat, gently press your left shoulder downward and bring your right shoulder upward with a smooth twisting motion. Repeat on your other side.



5. Chest Stretch



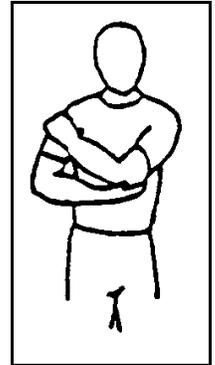
Stretches your chest muscles.

Stand next to a wall approximately 8-12 inches away. Extend your arm back placing the palm of your hand on the wall below shoulder level. Your thumb should face the ceiling. Slowly rotate your body away from the wall. Repeat on your other side.

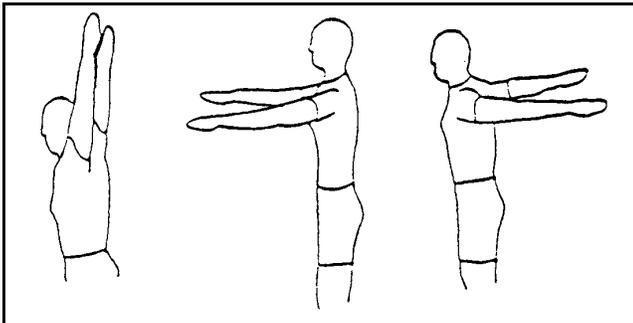
6. Shoulder Stretch

Stretches your shoulders and upper back muscles.

Stand up straight with your feet shoulder-width apart and your knees slightly bent. Reach your left hand across your body to your right shoulder. Use your right hand to hold your left arm. Place your right hand on the back of your left arm just above your elbow. Gently press your left arm with your right hand. Do not rotate torso. Repeat on your other side.



7. Arm Circles



Stretches your chest and shoulder muscles.

Standing with your feet shoulder-width apart and knees slightly bent, perform slow, full-arm circles backward 5 to 10 times, then forward the same number of times. The thumb-side of your hand should always lead and your arms should brush past your ears and the sides of your body.

8. Finger Extension-Flexion

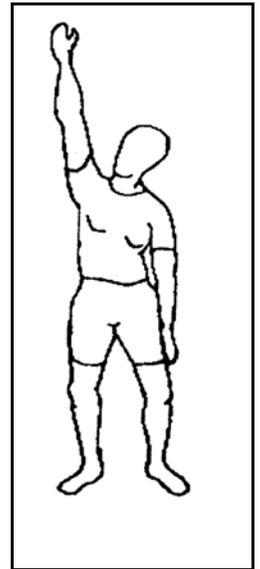
Stretches your finger muscles.

Stand with your arms stretched in front, feet slightly apart and your palms facing the floor. Begin by extending your fingers to the open hand position. Bring your fingers together in a fist and repeat the motion of opening your hand to extend your fingers. Exercise both hands simultaneously. Perform this exercise 10 times.

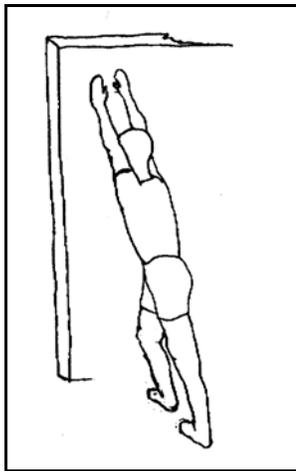
9. Side Stretch or Reach

Stretches the muscles on the sides of your trunk.

Standing with your feet shoulder-width apart and your knees slightly bent, place your left hand on your left outer thigh and extend your right arm overhead with your thumb pointing backward. Reach straight up with your right hand as you slide your left hand down your thigh towards your knee until you feel a stretch up your side. Do not allow your right foot to raise from the floor. Repeat on your other side.



10. Wall Lean



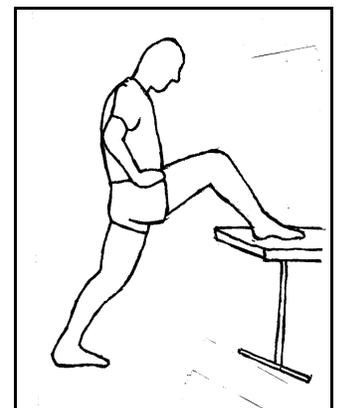
Stretches the muscles in the back of your lower legs.

Stand about arms distance away from a wall with your feet slightly spread apart. Put both hands on the wall. Keeping your heel on the floor, toe slightly turned in and your leg straight, slide one foot back until a stretch is felt in your calf. Repeat on your other side.

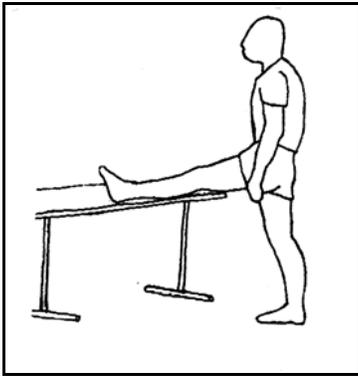
11. Stride Stretch

Stretches the muscles in the front of your thigh.

Stand facing a sturdy bench approximately 2-3 feet high. Keeping your hips and shoulders forward, place one foot flat on the top of the bench. Maintain erect posture while pushing your hips forward until you feel the stretch in the front of your hip. Do not allow your front knee to go beyond your mid-foot. Repeat on your other side.



12. Hamstring Stretch



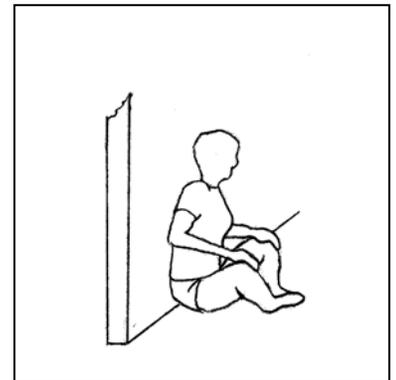
Stretches the muscles in the back of your thigh.

Stand facing a sturdy bench approximately 2-3 feet high. Keeping your hips and shoulders straight, place one heel on the top of the bench. Maintain a flat back while hinging slightly forward at your hips until you feel the stretch. Do not bend at your waist.

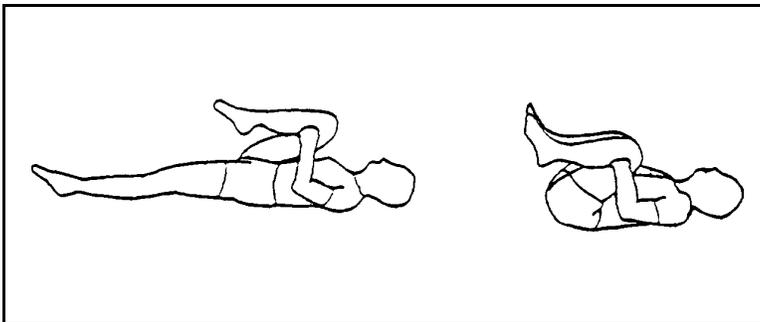
13. Groin Stretch

Stretches the muscles of your inner thighs and hips.

Sit with your back flat against a wall. Bring the soles of your feet together and allow your knees to drop to the floor. Gently press your knees toward the floor with your hands.



14. Knee to Chest



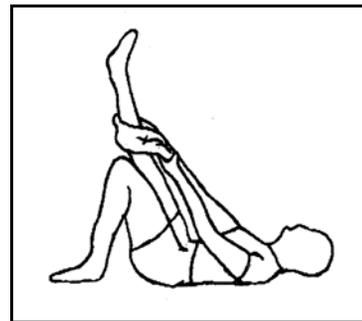
Stretches the muscles in your lower back and the back of your thighs.

Lie on the floor on your back. Pull one knee toward your chest with your hands clasped behind your bent knee. Repeat with your other leg. Finally, pull both knees toward your chest.

15. Supine Leg Stretch

Stretches the muscles of the back of your thigh.

Lie on the floor on your back with one leg bent and your foot flat on the floor and your other leg extended in the air. Wrap a towel behind the knee of your extended leg. Slowly pull your leg back toward your head. Repeat on your other side.



CAUTION: When it comes to stretching, you should feel the stretching sensation in the muscle, **NOT** the joints. If you feel pain in the joints, check to be sure you are performing the stretch correctly. If after trying the stretch again, you still feel pain in the joints, avoid that stretch.

C. Calisthenics

Calisthenics are exercises that use body weight as the load or resistance. The exercise routine should be performed 3 to 4 times per week. To begin with, each exercise should be performed as many times as possible at a continuous, steady pace and that number repeated for each exercise during the first week. Thereafter, the number of repetitions for each exercise should be increased by at least the number indicated for each exercise below. Remember to use the form in the next section to keep a performance log.

The following calisthenics exercises are to be avoided because they create too much stress in certain joints. More effective calisthenic exercises are listed and explained in this section of the Guide.

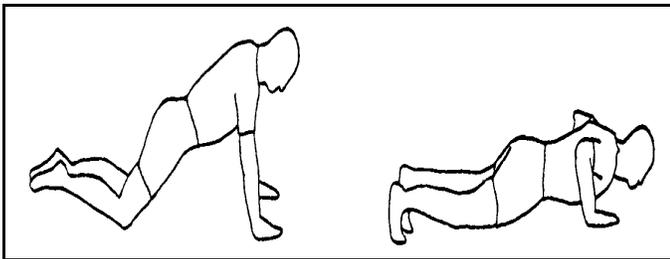
DO NOT DO THESE CALISTHENICS EXERCISES

- Deep knee bends
- Double leg lifts (raising both legs while lying on your back)
- Straight leg sit-ups (sit-ups with straight legs)
- Toe-touches from a standing position (bending at waist and touching toes while keeping legs straight)

Calisthenics Exercise Descriptions

These exercises are listed in the suggested order of performance. Be sure to complete a warm-up period before doing these exercises.

1. **Push-Ups**



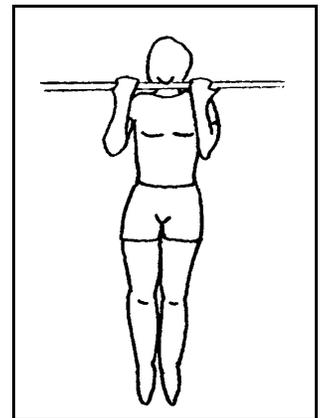
For the chest, shoulder region and back of your upper arms.

With your hands outside your shoulders, push up while keeping your back straight. Push-ups can be performed with your legs straight and your weight resting on your toes, or with your legs bent and your weight resting on your knees. Return until your chest almost touches the floor. Aim at increasing by at least 1 push-up per week.

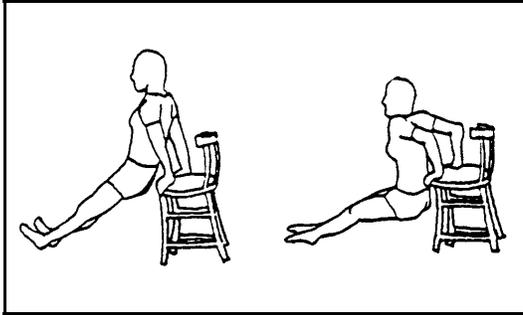
2. **Chin-Ups**

For the shoulder region and arm flexion.

With an underhand grasp, raise your body until your chin is over the bar. Lower yourself as slowly as possible. Increase by at least 1 per week.



3. Dips



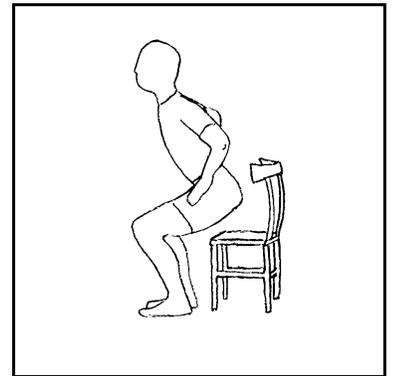
For the muscles in your arms, shoulders and chest.

Grasp the sides of a chair and let your feet slide forward while supporting your weight on your arms. Lower your body by bending your elbows to about 60 degrees and then push up to the starting position. Keep your body close to the chair. Increase by at least 1 per week.

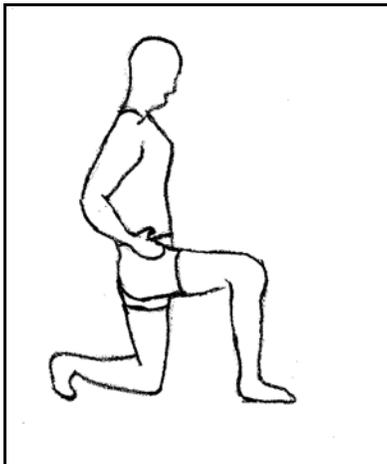
4. Chair Squats

For the leg muscles.

Stand about 6 inches in front of a chair, facing away from the chair. With your feet slightly wider than shoulder-width, move your hips back as you squat until your thighs are almost parallel to the ground, without sitting down on the chair. Your kneecaps should be aligned towards your second toe and your knees should not travel beyond the mid-foot. Hold for 1-2 seconds. Return to a standing position. Increase the number of squats by at least 1 per week, up to a maximum of 25. As an advanced exercise, the exercise can be done with a weight secured to the back, for example, a backpack.



5. Lunges and Forward Traveling Lunges



For the leg muscles.

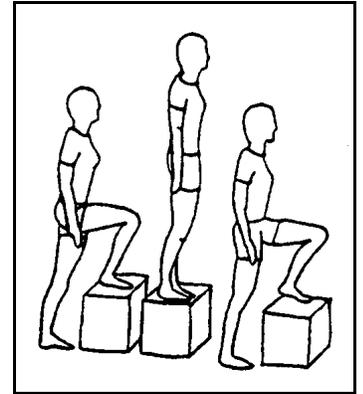
Stand with your feet hip-width apart in a stride position and your hands on your hips. Lower your body directly between your feet by bending your knees to approximately 90-degree angles. Press back up to the starting position. Perform the same number of lunges on the other side. Increase the number of lunges by at least 2 per week, up to a maximum of 25.

Variation: Step forward with your right foot and lower your body weight to a lunge position. Bend your knees to approximately 90-degree angles. Push through your hips and thighs in order to bring your left foot forward to meet your right foot. Continue to lunge, walking forward alternating feet.

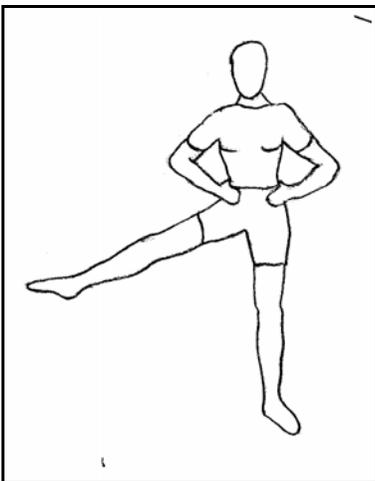
6. Bench Steps

For the leg muscles.

Step up onto a bench that is 8-12" high, bringing up both of your feet and then down again, one foot at a time, for 30 seconds ("up-up-down-down"). Switch the lead foot and repeat for 30 seconds. Increase the time for each lead foot by 10 seconds per week, up to a maximum of 60 seconds of stepping up and down with each lead foot.



7. Standing Side Leg Lifts



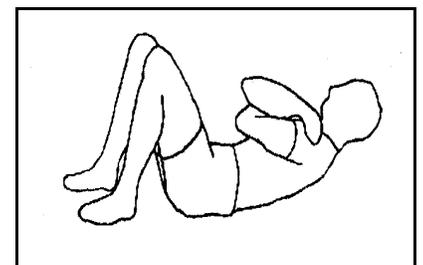
For your hip and outer thigh muscles.

Stand with your feet shoulder-width apart and your hands on your hips. Transfer your body weight completely to your left leg. Keep your right leg straight and lift it directly to your side. Lower your right leg just short of your resting foot on the floor then lift again. Maintain an upright posture. Perform the same number of leg lifts on the other side. Increase the number of lifts by at least 2 per week, up to a maximum of 25 per side.

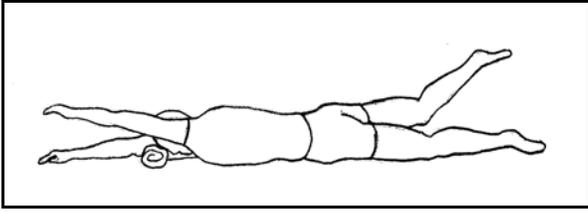
8. Curl-Ups

For the abdominal region.

Lie face up on the floor with your legs bent and your heels approximately 8-12 inches from your buttocks. Using abdominal muscles, tilt your hips towards your ribcage as you raise your head and shoulders off of the floor pressing your lower back towards the floor. Your eyes should stay focused over your knees. Your hands and arms may be supporting your head, crossed over your chest, sliding up your legs or resting on the floor. Increase by at least 2 per week.



9. Opposite Arm and Leg Lifts



For the muscles in your back, buttocks and the back of your legs.

Lie face down on the floor with your forehead resting on a towel. Your arms should be stretched overhead with your hands shoulder-width apart. Raise your left arm and your right leg approximately 4-8 inches from the floor. Lower your arm and leg to the starting position. Repeat on the other side. Increase by at least 1 per week, up to a maximum of 15 raises per side.

10. Hand-Grip Strength

For your finger, hand and forearm muscles.

Use a rubber ball or any commercially available spring loaded hand grip device. Grip and squeeze the ball with one hand 8 times and then alternate to your other hand and grip and squeeze 8 times. Repeat the sequence 4 times for each hand. Increase the number of squeezes per hand by 2 each week while keeping the number of sequences for each hand at 4.

D. Weight Training

Weight training is one method by which an overload can be applied to a muscle or muscle group in order to improve muscular endurance and strength. The weight training program provided in this section of the Guide is intended to exercise all the major muscle groups. A progressive training program that extends up to 12 weeks is presented in the table on the next page. The table includes the following terms:

Load: Refers to the number of pounds of resistance lifted or moved.

Repetitions: Refers to the number of consecutive times the exercise is done without interruption or rest, "reps."

Set: One set equals the number of repetitions performed for one exercise. If the recommendation is for 3 sets, then 3 groups of "reps" are to be done in the exercise session. It would also be described as one round of all the different exercises, should the "reps" for an exercise not be done consecutively.

The weight training exercises that are recommended for this program can be performed through the combined use of free weights and weight machines, or through the use of a weight machine. Two exercises (i.e., curl-ups and bench steps from the calisthenics program) that have body weight as the load instead of external weights are included in this training program to ensure that all relevant muscle groups are exercised.

The recommended initial load (IL) is given at the end of each exercise description. If you cannot move the recommended initial load or cannot complete the 4 reps to start your program, reduce the recommended initial load by increments of 5 lbs. until you are able to complete 4 consecutive repetitions. Record the load on your log page.

If, on the other hand, the recommended initial load does not appear to stress you for the beginning 4 reps, then add increments of 5 lbs. until you feel that the load represents an overload for that muscle group. Another way of determining the initial load is to use the maximum load you can move once in a specific exercise. Use 80% of that maximum load as the initial load for that exercise. If you use the latter method to determine your initial load, it is extremely important that you have another person there to assist you. In fact, it is a good idea to have another person assist you in the determination of your initial load, or on the first day of training, regardless of the way you determine the initial load for each exercise.

WEIGHT TRAINING PROGRESSION			
Week	Load	Repetitions	Sets
1	Initial Load (IL)	4	3
2	IL	6	3
3	IL	8	3
4	IL + 5lb	4	3
5	IL + 5lb	6	3
6	IL + 5lb	8	3
7	IL + 10lb	4	3
8	IL + 10lb	6	3
9	IL + 10lb	8	3
10	IL + 15 - 20lb	4	3
11	IL + 15 - 20lb	6	3
12	IL + 15 - 20lb	8	3

Weight Training Exercise Descriptions

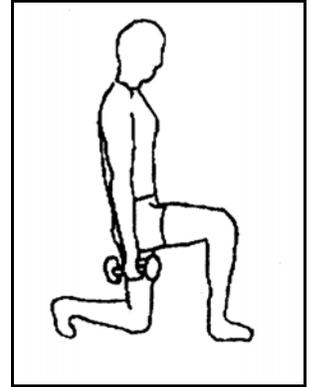
These exercises are listed in the suggested order of performance. This program should be performed 3 times per week. Keep a log of the loads and number of repetitions, as appropriate. Be sure to complete a warm-up period prior to weight training.

1. Lunges and Forward Traveling Lunges

For the leg muscles.

Stand with your feet hip-width apart in a stride position. Hold dumbbells next to your body or rest a weight bar on your shoulders behind your neck with the palms of your hands facing forward and spread far apart on the bar. Lower your body directly between your feet by bending your knees to approximately 90-degree angles. Press back up to the starting position. Perform the same number of lunges on the other side. Suggested initial load: 1/4 of your body weight.

Variation: Hold dumbbells next to your body or rest a weight bar on your shoulders behind your neck with the palms of your hands facing forward and spread far apart on the bar. Step forward with your right foot and lower your body weight to a lunge position. Bend your knees to approximately 90-degree angles. Push through your hips and thighs in order to bring your left foot forward to meet your right foot. Continue lunge walking forward alternating feet.



2. Toe Raises



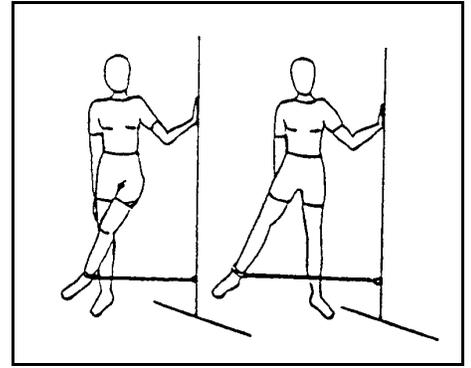
For the muscles in the back of your lower leg.

Stand on a platform at least 4 inches high on your right leg and hold a dumbbell in your right hand. Balance yourself with your left hand. Keeping your right knee straight, raise upward on the ball of your right foot as high as possible then slowly lower your heel towards the floor. Do not stretch down as far as possible. Repeat on other side. Suggested initial load: 1/8 of your body weight.

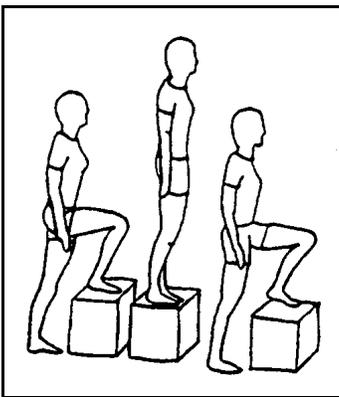
3. Side Leg Raises

For your hip and thigh muscles.

Standing with your side to the pulley at a pulley station and holding the frame of the pulley system with one hand, hook the ankle of your outside leg to the pulley. With your knee slightly bent, move your leg to the side, as far as possible, and then return to the starting position. After completing a set, hook the ankle of your inside leg to the pulley. With your knee straight, move your leg in front of your other leg as far to the side as possible and complete a set. Turn around and repeat the exercises with your opposite leg. Suggested initial load: 1/4 of your body weight.



4. Bench Steps



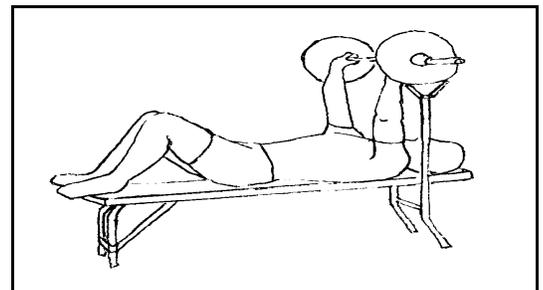
For your leg muscles.

Step up onto a bench 8-12" high, bringing up both feet and then down again, one foot at a time, for 30 seconds ("up-up-down-down"). Increase the time for each lead foot by 10 seconds per week, up to a maximum of 60 seconds of stepping up and down with each lead foot.

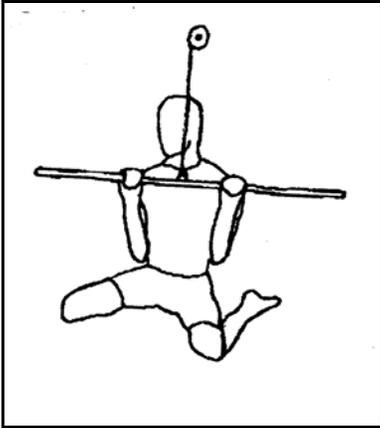
5. Bench Press

For the muscles in your shoulder, chest and arms.

Lie on your back on a bench with your feet on the bench. Hold the bar above your chest with an overhand grip, hands slightly wider than shoulder width, and elbows straight. Lower the bar to approximately 1 inch above your chest and then return it to the starting position. Suggested initial load: 1/3 of your body weight.



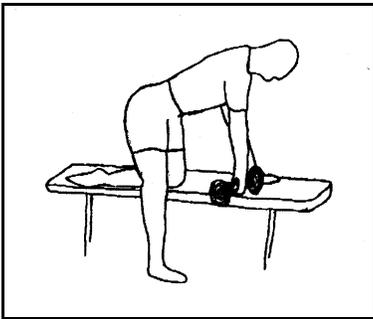
6. Lateral Pull-Downs



For the muscles in your upper and mid-back.

Grip the bar with the palms of your hands forward, hands slightly wider than shoulder-width apart. Start from a sitting position or kneeling position on the floor with your arms stretched overhead. Lean your body back slightly. Pull the bar towards your chest. It is not necessary to touch your chest. Return to the starting position. Suggested initial load: 1/3 of your body weight.

7. Bent Over Row



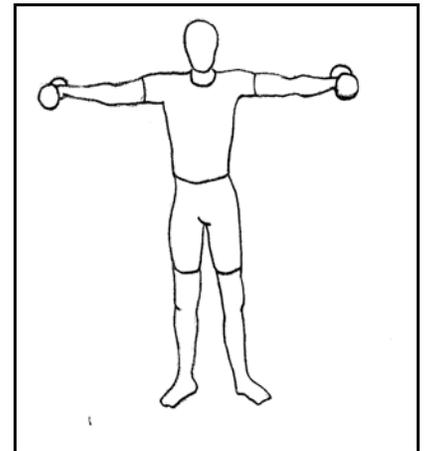
For the muscles in your upper and mid-back.

Stand next to a bench with your left hand and left knee on the top of the bench. Maintain flat back position. Grasp a dumbbell in your right hand. Pull your right elbow towards the ceiling brushing your right forearm by your ribcage. Slowly return to the starting position. Repeat on the other side. Suggested initial load: 1/8 of your body weight.

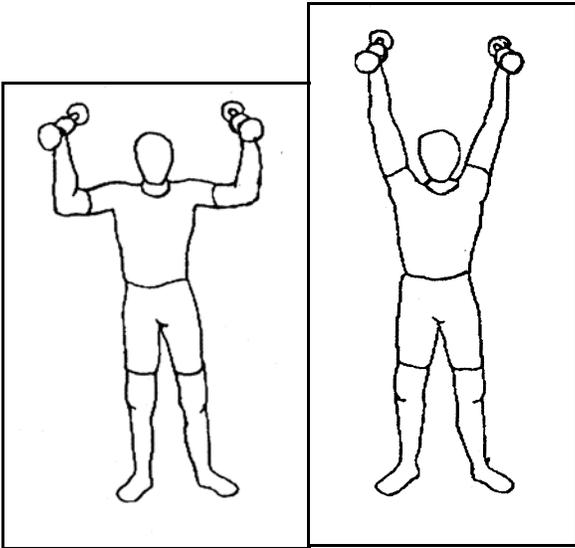
8. Lateral Raises

For your shoulders.

Stand erect with your feet shoulder-width apart and your knees slightly bent. Hold dumbbells slightly forward of your thighs. Maintain a slight bend in your elbow as you raise your arms to shoulder level. Your hands should remain in peripheral vision. Slowly return to the starting position. Suggested initial load: 1/20 of your body weight.



9. Overhead Press



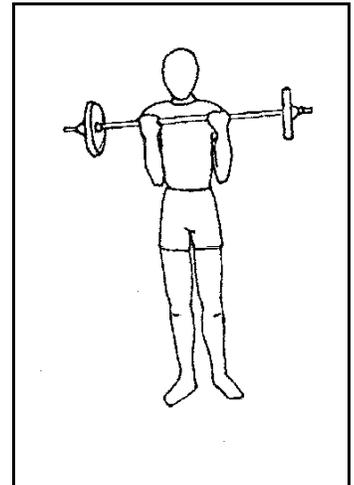
For the muscles in your shoulders.

Sit or stand erect with your feet shoulder-width apart. Hold dumbbells with the palms of your hands facing your ears, your hands should be positioned directly over your elbows. Push the dumbbells straight up to an overhead position until your arms are straight and then lower the dumbbells in a controlled manner to the starting position. Do not arch your back. Suggested initial load: 1/4 of your body weight.

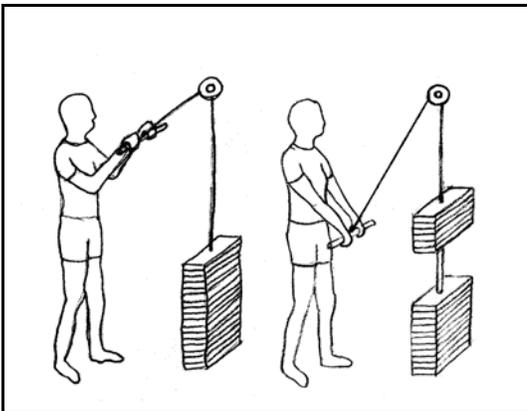
10. Arm Curls

For the muscles that bend your elbow.

Standing with your elbows straight and in front of your thighs, hold a weight bar with an underhand grip, hands shoulder-width apart. Keeping your elbows close to your sides, bend your elbows and raise the bar to your chest, then slowly lower the bar to the starting position. Do not lean backward while raising the bar or forward when lowering it. Suggested initial load: 1/4 of your body weight.



11. Triceps Push-Down



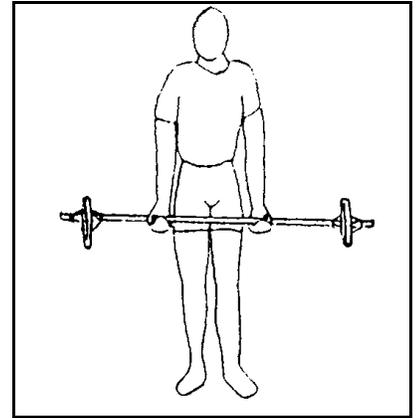
For the muscles that extend your elbow.

Attach a bar to the top pulley at a pulley station. Stand with your feet shoulder-width apart one foot in front of the other and your knees slightly bent. Grasp the bar with the palms of your hands forward and shoulder-width apart. Pull the bar down so that your elbows are next to but not touching your ribcage. Straighten your elbows pressing the bar down towards your thighs and then return to the starting position. Suggested initial load: 1/3 of your body weight.

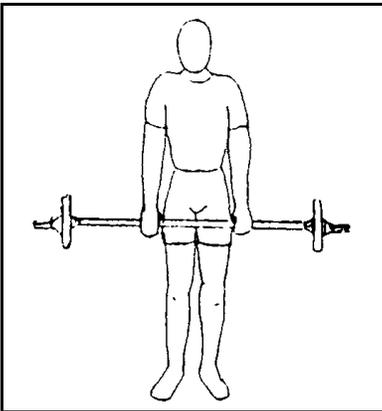
12. Wrist Curls

For the muscles that bend your wrist.

Standing with your elbows straight and in front of your thighs, hold a weight bar with an underhand grip, hands shoulder-width apart. Keeping your elbows close to your sides, curl your wrists to raise the bar, then slowly lower the bar to the starting position. Suggested initial load: 1/4 of your body weight.



13. Reverse Wrist Curls



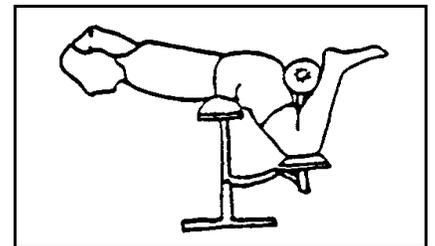
For the muscles that extend your wrist.

Standing with your elbows straight and in front of your thighs, hold a weight bar with an overhand grip, hands shoulder-width apart. Keeping your elbows close to your sides, extend your wrists to raise the bar, then slowly lower the bar to the starting position. Suggested initial load: 1/4 of your body weight.

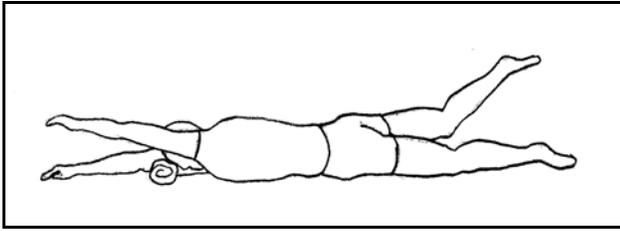
14. Trunk Lifts

For the muscles in your back, buttocks and the back of your legs.

Lie on your abdomen, with your trunk unsupported over the edge of a trunk lift station support, and bend so that your trunk is nearly perpendicular to the ground. With your hands locked behind your head, slowly lift your trunk and head so that your back is parallel to the ground and then return to the starting position. Suggested initial load: 5 lifts. Increase the number of lifts by at least 1 per week, up to a maximum of 15.



15. Opposite Arm and Leg Lifts



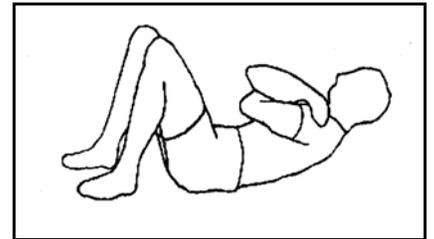
For the muscles in your back, buttocks and the back of your legs.

Lie face down on the floor with your forehead resting on a towel. Your arms should be stretched overhead with your hands shoulder-width apart. Raise your left arm and your right leg approximately 4-8 inches from the floor. Lower to the starting position. Repeat on other side. Increase by at least 1 raise per week, up to a maximum of 15 raises per side.

16. Curl-Ups

For your abdominal region.

Lie face up on the floor with your legs bent and heels approximately 8-12 inches from your buttocks. Using your abdominal muscles, tilt your hips towards your ribcage as you raise your head and shoulders off of the floor pressing your lower back towards the floor. Eyes should stay focused over your knees. Your hands and arms may be supporting your head, crossed over your chest, sliding up your legs as you raise off of the floor or resting on the floor. Increase by at least 2 per week.



E. Aerobic Training Program

The aerobic training program is designed to develop cardiovascular endurance as well as muscular endurance in the legs. The running and stair climbing programs should be done 3 times per week, or as indicated in the Running Program Progression table below.

Exercise Descriptions

1. Running Program

Significant improvements in aerobic conditioning should be evident after 10-12 weeks of training. The following program is designed with a progression that extends up to 12 weeks. If you continue to train for longer periods, you should continue to progressively increase the distance while maintaining the intensity at 7-8 minutes per mile. Start the program by walking, then walk and run, or run, as necessary to meet the changing time goals.

RUNNING PROGRAM PROGRESSION			
Week	Distance (Miles)	Time Goal (minutes: seconds)	Times Per Week
1	2.0	30:30	3
2	2.0	27:00	3
3	2.0	26:00	3
4	2.0	25:00	3
5	2.0	24:00	3
6	2.0	22:00	3
7	2.0	19:00	3
8	2.0	18:00	4
9	2.0	17:00	4
10	2.5	22:00	3
11	2.5	21:30	4
12	3.0	26:30	4

2. **Stair Run**

Keeping a moderate but steady pace, run up stairs to the second floor from where you start (for example, from the first to the third floor) and then run back down the stairs to the level from which you started. Repeat as many times as you can without resting, and count each round trip you can run while keeping the same steady pace. For the first week, run as many round trips as were done on the first day and record the amount of time you kept moving on the stairs. Increase the number of round trips by 1 per week, up to a maximum duration of 10 minutes of running up and down the stairs. Thereafter, try to increase the number of round trips you make during the 10 minutes. The stair climbing program is designed to develop cardiovascular endurance as well as muscular endurance in the legs. The stair climbing program should be done 3 times per week.

F. Cool-Down

The cool-down session should be performed for 5 to 10 minutes at the end of each exercise period. The purpose of this phase of the program is to gradually decrease the heart rate, to continue adequate blood circulation, and to decrease the chance that dizziness, nausea or other problems may follow the exercise session.

After you complete an aerobic training session, begin to jog, then walk rapidly for a total of about 5 minutes. Continue with moderate walking. Afterward, do the following stretching exercises. Descriptions of these stretches can be found in the Warm-up section of this Guide.

- Hamstring Stretch
- Supine Leg Stretch
- Stride Stretch
- Wall Lean
- Shoulder Stretch
- Arm Circles

If your work-out session consisted of only the strength and muscular endurance exercises, walk at a moderate pace for a few minutes and then perform the stretches listed above from the Warm-up section of this Guide.

SECTION IV: WEEKLY LOG PAGES

A. Weekly Log: Calisthenics and Aerobic Exercises

Date of Session #1: _____ Body Weight: _____

Date of Session #2: _____ Body Weight: _____

Date of Session #3: _____ Body Weight: _____

Date of Session #4: _____ Body Weight: _____

Exercise		Session 1	Session 2	Session 3	Session 4												
CALISTENICS TRAINING EXERCISES																	
Push-Ups	# of reps																
Chin-Ups	# of reps																
Dips	# of reps																
Chair Squats (max=25 reps)	# of reps																
Lunges (max=25 reps)	# of reps																
Bench Steps (max=60 sec)	time																
Standing Side Leg Lifts (max=25 reps)	# of reps																
Curl-Ups	# of reps																
Opposite Arm and Leg Lifts (max=15 reps)	# of reps																
Hand-Grip Strength (4 sequences)	# of reps																
AEROBIC TRAINING EXERCISES																	
Running Program	distance																
	time																
Stair Run (max=10 min)	# of trips																
	time																

B. Weekly Log: Weight Training and Aerobic Exercises

Date of Session #1: _____ Body Weight: _____

Date of Session #2: _____ Body Weight: _____

Date of Session #3: _____ Body Weight: _____

Date of Session #4: _____ Body Weight: _____

Workout Session		Session 1			Session 2			Session 3			Session 4		
Set		1	2	3	1	2	3	1	2	3	1	2	3
WEIGHT TRAINING EXERCISES													
Lunges\Forward Traveling Lunges	# of reps												
	load (lbs.)												
Toe Raises	# of reps												
	load (lbs.)												
Side Leg Raises	# of reps												
	load (lbs.)												
Bench Steps (max=60 sec)	time (sec)												
Bench Press	# of reps												
	load (lbs.)												
Lateral Pull-Downs	# of reps												
	load (lbs.)												
Bent Over Row	# of reps												
	load (lbs.)												
Lateral Raises	# of reps												
	load (lbs.)												
Overhead Press	# of reps												
	load (lbs.)												
Arm Curls	# of reps												
	load (lbs.)												
Triceps Push-Down	# of reps												
	load (lbs.)												
Wrist Curls	# of reps												
	load (lbs.)												
Reverse Wrist Curls	# of reps												
	load (lbs.)												
Trunk Lifts (max=15 reps)	# of lifts												
Opposite Arm/Leg Lifts (max=15 reps)	# of raises												
Curl-Ups	# of reps												
AEROBIC TRAINING EXERCISES													
Running Program	distance												
	time												
Stair Run (max=10 min)	# of trips												
	time												

SECTION V: REFERENCES USED IN THE PT SECTION OF THIS GUIDE

The following sources were used as references in the development of the fitness program presented in this Guide.

1. American College of Sports Medicine. Fitness Book. Champaign, IL: Leisure Press, 1992.
2. American College of Sports Medicine. Guidelines for Exercise Testing and Prescription. Fifth Edition. Baltimore: Williams and Wilkins, 1995.
3. Cooper, K. H. The Aerobics Way. New York: M. Evans Co., 1977.
4. Heyward, Vivian H. Designs for Fitness. Minneapolis: Burgess Publishing Co., 1984.
5. Howley, Edward T. & B. Don Franks. Health/Fitness Instructor's Handbook. Champaign, IL: Human Kinetics Publishers, 1986.
6. Sharkey, Brian J. Physiology of Fitness. Champaign, IL: Human Kinetics Publishers, 1979.
7. Reid, J. Gavin & John M. Thomson. Exercise Prescription for Fitness. Englewood Cliffs, NJ: Prentice Hall, Inc., 1985.

FINAL WORDS

This Guide is designed to familiarize you with all aspects of the test components comprising the DSP Entry-Level Trooper Examination, including the simulations or questions, logistics and evaluation procedures; as well as to provide some suggestions for preparation. The suggestions provided here are not exhaustive -- we encourage you to engage in whatever additional preparation strategies you believe will enhance your chances of performing effectively on the examination and on the job.