

C HAPTER TWO: THE BASICS OF LOGICAL REASONING

The Logical Reasoning Section

The focus of this book is on the Logical Reasoning section of the LSAT. Each Logical Reasoning section contains a total of 24 to 26 questions. Since you have thirty-five minutes to complete the section, you have an average of approximately one minute and twenty-five seconds to complete each question. Of course, the amount of time you spend on each question will vary with the difficulty of each question and the total number of questions per section. For virtually all students the time constraint is a major obstacle, and as we progress through this book we will discuss time management techniques as well as time-saving techniques that you can employ within the section.

On average, you have 1 minute and 25 seconds to complete each question.

The Section Directions

Each Logical Reasoning section is prefaced by the following directions:

“The questions in this section are based on the reasoning contained in brief statements or passages. For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, the response that most accurately and completely answers the question. You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. After you have chosen the best answer, blacken the corresponding space on your answer sheet.”

Because these directions precede every Logical Reasoning section, you should familiarize yourself with them now. Once the LSAT begins, never waste time reading the directions for any section.

Let us examine these directions more closely. Consider the following sentences: “For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, the response that most accurately and completely answers the question.” By stating up front that more than one answer choice could suffice to answer the question, the makers of the test compel you to read every single answer choice before making a selection. If you read only one or two answer choices and then decide you have the correct one, you could end up choosing an answer that has some merit but is not as good as a later answer. One of the test makers’ favorite tricks is to place a highly attractive wrong answer choice immediately before the correct answer choice in the hopes that you will pick the wrong answer choice and then move to the next question without reading any of the other answers.

Always read each of the five answer choices before deciding which answer is correct.

Assumptions are a critical part of LSAT Logical Reasoning, and we will talk about assumptions in more detail in a later chapter.

Here's a good example of what they expect you to assume: when "television" is introduced in a stimulus, they expect you to know, among other things, what a TV show is, that TV can portray the make-believe or real, what actors do, and that TV is shown by beaming signals into TV sets in homes and elsewhere.

The question to the right, from the October 2003 LSAT, is presented for demonstration purposes only. The problem contains Formal Logic, which we will examine in great detail in a later chapter. For those of you who wish to try the problem now, the correct answer is listed in the first sidebar on the next page.

The other part of the directions that is interesting is the sentence that states, "You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage." The implication here is that you can make some assumptions when working with questions, but not other assumptions. Of course, Law Services does not hand a list of what constitutes a commonsense assumption! Even outside of the LSAT, the test makers do not clearly state what assumptions are acceptable or unacceptable for you to make, mainly because such a list would be almost infinite. For LSAT purposes, approaching each question you can take as true any statement or idea that the average American would be expected to believe on the basis of generally known and accepted facts. For example, in a question you can assume that the sky sometimes becomes cloudy, but you cannot assume that sky is always cloudy (unless stated explicitly by the question). LSAT questions will not require you to make assumptions based on extreme ideas (such as that it always rains in Seattle) or ideas not in the general domain of knowledge (such as the per capita income of residents of France). Please note that this does not mean that the LSAT cannot set up scenarios where they discuss ideas that are extreme or outside the bounds of common knowledge. Within a Logical Reasoning question, the test makers can and do discuss complex or extreme ideas; in these cases, they will give you context for the situation by providing additional information. However, be careful about assuming something to be true unless you believe it is a widely accepted fact or the test makers indicate you should believe it to be true. This last idea is one we will discuss in much more detail as we look at individual question types.

The Parts of a Logical Reasoning Question

Every Logical Reasoning question contains three separate parts: the stimulus, the question stem, and the five answer choices. The following diagram identifies each part:

1. Most serious students are happy students, and most serious students go to graduate school. Furthermore, all students who go to graduate school are overworked. _____ Stimulus

Which one of the following can be properly inferred from the statements above? _____ Question Stem

(A) Most overworked students are happy students.
(B) Some happy students are overworked.
(C) All overworked students are serious students. _____ Answer Choices
(D) Some unhappy students go to graduate school.
(E) All serious students are overworked.

Approaching The Questions

When examining the three parts, students sometimes wonder about the best strategy for attacking a question: should I read the question stem first? Should I preview the five answer choices? The answer is Read the parts in the order given. That is, first read the stimulus, then read the question stem, and finally read each of the five answer choices. Although this may seem like a reasonable, even obvious approach, we mention it here because some LSAT texts advocate reading the question stem before reading the stimulus. We are certain that these texts are seriously mistaken, and here are a few reasons why:

1. Understanding the stimulus is the key to answering any question, and reading the question stem first tends to undermine the ability of students to fully comprehend the information in the stimulus. On easy questions this distraction tends not to have a significant negative impact, but on more difficult questions the student often is forced to read the stimulus twice in order to get full comprehension, thus wasting valuable time. Literally, by reading the question stem first, students are forced to juggle two things at once: the question stem and the information in the stimulus. That is a difficult task when under time pressure. The bottom line is that any viable strategy must be effective for questions at all difficulty levels, but when you read the question stem first you cannot perform optimally. True, the approach works with the easy questions, but those questions could very likely have been answered correctly regardless of the approach used.
2. Reading the question stem first often wastes valuable time since the typical student will read the stem, then read the stimulus, and then read the stem again. Unfortunately, there simply is not enough time to read every question stem twice.
3. Some question stems refer to information given in the stimulus, or add new conditions onto the stimulus information. Thus, reading the stem first is of little value and often confuses or distracts the student when they go to read the stimulus.
4. On stimuli with two questions, reading one stem biases the reader to look for that specific information, possibly causing problems while doing the second question, and reading both stems wastes entirely too much time and leads to confusion.
5. For truly knowledgeable test takers there are situations that arise where the question stem is fairly predictable. One example—and there are others—is with a question type called Resolve the Paradox. Usually, when you read the stimulus that accompanies these questions, an obvious paradox or discrepancy is presented. Reading the question stem beforehand does not add anything to what you would have known just from reading the stimulus. In later chapters we will discuss this situation and others where you can predict the question stem with some success.

The correct answer to the problem on the previous page is answer choice (B). This is not an easy problem, but after you read through our chapter on Formal Logic this question will seem very reasonable.

In our experience, the vast majority of high-scoring LSAT takers read the stimulus first.

6. Finally, we believe that one of the principles underlying the read-the-question-stem-first approach is flawed. Many advocates of the approach claim that it helps the test taker avoid the “harder” questions, such as Parallel Reasoning or Method of Reasoning. However, test data shows that questions of any type can be hard or easy. Some Method of Reasoning questions are phenomenally easy whereas some Method of Reasoning questions are extremely difficult. In short, the question stem is a poor indicator of difficulty because question difficulty is more directly related to the complexity of the stimulus and the corresponding answer choices.

Understandably, reading the question stem before the stimulus sounds like a good idea at first, but for the majority of students (especially those trying to score in the 160s and above), the approach is a hindrance, not a help. Solid test performance depends on your ability to quickly comprehend complex argumentation; do not make your task harder by reading the question stem first.

Analyzing the Stimulus

As you read the stimulus, initially focus on making a quick analysis of the topic under discussion. What area has the author chosen to write about? You will be more familiar with some topics than with others, but do not assume that everything you know “outside” of the stimulus regarding the topic is true and applies to the stimulus. For example, say you work in a real estate office and you come across an LSAT question about property sales. You can use your work experience and knowledge of real estate to help you better understand what the author is discussing, but do not assume that things will operate in the stimulus exactly as they do at your workplace. Perhaps property transactions in your state are different than those in other states, or perhaps protocols followed in your office differ from those elsewhere. In an LSAT question, look carefully at what the author says about the topic at hand; statements presented as facts on the LSAT can and do vary from what occurs in the “real world.” This discrepancy between the “LSAT world” and the “real world” is one you must always be aware of: although the two worlds often overlap, things in the LSAT world are often very different from what you expect. From our earlier discussion of commonsense assumptions we know that you can assume that basic, widely-held facts will hold true in the LSAT world, but by the same token, you cannot assume that specialized information that you have learned in the real world will hold true on the LSAT. We will discuss outside information in more detail when we discuss LSAT question types.

Next, make sure to read the entire stimulus very carefully. The makers of the LSAT have extraordinarily high expectations about the level of detail you should retain when you read a stimulus. Many questions will test your knowledge of small, seemingly nitpicky variations in phrasing, and reading carelessly is LSAT suicide. In many respects, the requirement forced upon you

Reading closely is a critical LSAT skill.

to read carefully is what makes the time constraint so difficult to handle. Every test taker is placed at the nexus of two competing elements: the need for speed (caused by the timed element) and the need for patience (caused by the detailed reading requirement). How well you manage these two elements strongly determines how well you perform. Later in this chapter we will discuss how to practice using time elements, and near the end of the book we will discuss section management techniques.

Finally, analyze the structure of the stimulus: what pieces are present and how do those pieces relate to each other? In short, you are tasked with knowing as much as possible about the statements made by the author, and in order to do so, you must understand how the makers create LSAT arguments. We will discuss argumentation in more detail in a moment.

Stimulus Topics

The spectrum of topics covered by Logical Reasoning stimuli is quite broad. Previous stimuli topics have ranged from art to economics to medicine and science. According to the makers of the test, “the arguments are contained in short passages taken from a variety of sources, including letters to the editor, speeches, advertisements, newspaper articles and editorials, informal discussions and conversations, as well as articles in the humanities, the social sciences, and the natural sciences.” Further, LSAT question topics “reflect a broad range of academic disciplines and are intended to give no advantage to candidates from a particular background.”

Despite the previous statement, many LSAT students come from a humanities background and these test takers often worry about stimuli containing scientific or medical topics. Remember, the topic of a stimulus does not affect the underlying logical relationship of the pieces. And, the LSAT will not assume that you know anything about advanced technical or scientific ideas. For example, while the LSAT may discuss mathematicians or the existence of a difficult problem in math, you will not be asked to make calculations nor will you be assumed to understand esoteric terminology. Any element beyond the domain of general public knowledge will be explained for you, as in the following example from the December 2003 LSAT:

Scientist: Isaac Newton’s *Principia*, the seventeenth-century work that served as the cornerstone of physics for over two centuries, could at first be understood by only a handful of people, but a basic understanding of Newton’s ideas eventually spread throughout the world. This shows that the barriers to communication between scientists...

The stimulus above, although only reproduced in part, is a good example of how the test makers will supply information they feel is essential to understanding the question. In this case, the reader is not expected to understand either the content or historical importance of *Principia*, and so the test makers conveniently furnish that information. Thus, although on occasion

LSAT argumentation is one of the main topics of this book, and will be discussed in every chapter.

Some specific topics do recur, and we will note those in future chapters.

you will see a stimulus that references an ominous looking word or idea (recent examples include superheated plasma and toxaphene), you will not need or be assumed to know anything more about those elements than what you are told by the test makers. When you read a science-based stimulus, focus on understanding the relationship of the ideas and do not be intimidated by the terminology used by the author. As we will ultimately find, reading an LSAT stimulus is about seeing past the topic to analyze the structural relationships present in the stimulus. Once you are able to see these relationships, the topic will become less important.

Arguments versus Fact Sets

LSAT stimuli fall into two distinct categories: those containing an argument and those that are just a set of facts. Logically speaking, an argument can be defined as a set of statements wherein one statement is claimed to follow from or be derived from the others. Consider the following short example of an argument:

All professors are ethical. Mason is a professor. So Mason is ethical.

The first two statements in this argument give the reasons (or “premises”) for accepting the third statement (the conclusion of the argument).

Fact sets, on the other hand, are a collection of statements without a conclusion, as in the following example:

“The Jacksonville area has just over one million residents. The Cincinnati area has almost two million residents. The New York area has almost twenty million residents.”

The three sentences above do not constitute an argument because no conclusion is present and an argument, by definition, requires a conclusion. The three sentences merely make a series of assertions without making a judgment. Notice that reading these sentences does not cause much of a reaction in most readers. Really, who cares about the city sizes? This lack of a strong reaction is often an indication that you are not reading an argument and are instead reading just a set of facts.

When reading Logical Reasoning stimuli, you should seek to make several key determinations, what we call the Logical Reasoning Primary Objectives™. Your first task is to determine if you are reading an argument or a fact set.

Primary Objective #1: Determine whether the stimulus contains an argument or if it is only a set of factual statements.

To achieve this objective, you must recognize whether a conclusion is present. Let us talk about how to do this next.

There are many books on logic and argumentation. In this book we attempt to concisely spell out what you need to know to succeed on the LSAT. This is different than philosophical logic, and therefore this section will not teach you argumentation as it is taught in a university.

Fact sets rarely cause a strong reaction in the reader because no persuasion is being used. When an author attempts to persuade you to believe a certain conclusion, there tends to be a noticeable reaction.