

g

Chapter 3

CRITICAL REASONING &
READING COMPREHENSION

QUESTION
TYPES

In This Chapter . . .

S

- General Strategy: Boundary Words
- General Strategy: Extreme Words
- General Strategy: “Except” Questions
- Type 1: Find an Assumption
- Type 2: Draw a Conclusion
- Type 3: Strengthen the Conclusion: S-W-Slash Chart
- Type 4: Weaken the Conclusion: S-W-Slash Chart
- Type 5: Analyze the Argument Structure
- Minor Question Types

QUESTION TYPES

The final piece of the Critical Reasoning puzzle is the QUESTION that follows the argument. There are several types of questions you can expect on the GMAT.

The 5 major question types are:

(1) Find an Assumption

(2) Draw a Conclusion

(3) Strengthen the Conclusion

(4) Weaken the Conclusion

(5) Analyze the Argument
Structure

Familiarize yourself
with the major question
types.

Notice that three of the five major question types focus on the conclusion. It is clear that the conclusion is the most important part of each argument.

There are also 7 minor question types. They are:

- | | |
|-------------------------------------|--------------------------|
| * Explain an Event or Discrepancy | * Provide an Example |
| * Make an Inference about a Premise | * Restate the Conclusion |
| * Evaluate the Conclusion | * Mimic the Argument |
| * Resolve a Problem | |

General Strategy: Boundary Words

For any question, it is helpful to focus your attention on the boundary words and phrases provided in the argument. These words and phrases narrow the scope of an argument.

Premise: **The percentage of literate adults has increased.**

The boundary word **percentage** limits the scope of the premise. It restricts the meaning to percentage only, as opposed to the actual number of literate adults. (Just because the percentage increased, does not mean that the actual number increased.) The boundary word **adults** also limits the scope of the premise. It restricts the meaning to adults only, as opposed to total people or children.

Conclusion: **Controversial speech should be allowed, provided it does not incite major violence.**

The boundary phrase **provided it does not incite major violence** limits the scope of the conclusion. It restricts the meaning to most types of controversial speech, as opposed to all types of controversial speech. The boundary word **major** limits the exception. Controversial speech should not be allowed when it incites major violence, as opposed to any violence.

Boundary words and phrases are vital because they provide the nuance of the argument. Many Critical Reasoning questions hinge on whether you understand and can apply the boundaries of an argument. Boundary words should always be underlined in your diagrams.

General Strategy: Extreme Words

Another general strategy for all Critical Reasoning questions involves EXTREME words and phrases. Extreme words and phrases do the opposite of boundary words. Using extreme words opens up an argument unreasonably, making the argument very susceptible to attack. For example:

Conclusion: **Sugar is never healthy for anyone trying to lose weight.**

The extreme word **never** unreasonably opens up this argument, putting no limitation on the claim that sugar is unhealthy. A more reasonable conclusion would argue that sugar is **usually unhealthy** or that **excessive sugar is unhealthy**. The extreme word **anyone** further opens up this argument. A more reasonable conclusion might be that this claim applies to *most* people trying to lose weight.

Since extreme words are not parts of good arguments, you should eliminate answer choices that use extreme words and phrases—especially when the question asks you to draw a conclusion or make an inference. Good GMAT conclusions and inferences always use moderate language. They NEVER use extreme words.

Avoid extreme words in answer choices.

General Strategy: “Except” Questions

Sometimes the GMAT will make a question more complex than it needs to be by using the word EXCEPT. The GMAT can manipulate all question types by using this complex EXCEPT formation. In order to combat this complexity, rephrase the EXCEPT statement into a question, inserting the word NOT and eliminating the word EXCEPT.

Each of the following helps to explain event X EXCEPT:

should be rephrased as: Which of the following does NOT help to explain event X?

Each of the following weakens the conclusion EXCEPT:

should be rephrased as: Which of the following does NOT weaken the conclusion?

Each of the following strengthens the conclusion EXCEPT:

should be rephrased as: Which of the following does NOT strengthen the conclusion?

Each of the following makes the argument logically correct EXCEPT:

should be rephrased as: Which of the following does NOT make the argument logically correct?

Rephrase EXCEPT questions to make them easier to understand.

Type 1: Find an Assumption

These questions ask you to identify an assumption upon which the argument is based.

The assumption you select should:

- (1) be closely tied to the conclusion
- (2) support/strengthen the conclusion

When limitations were in effect on nuclear-arms testing, people tended to save more of their money, but when nuclear-arms testing increased, people tended to spend more of their money. The perceived threat of nuclear catastrophe, therefore, decreases the willingness of people to postpone consumption for the sake of saving money.

The argument above assumes that

- (A) the perceived threat of nuclear catastrophe has increased over the years
- (B) most people supported the development of nuclear arms
- (C) people's perception of the threat of nuclear catastrophe depends on the amount of nuclear-arms testing being done
- (D) the people who saved the most money when nuclear-arms testing was limited were the ones who supported such limitations
- (E) there are more consumer goods available when nuclear-arms testing increases

*The Official Guide for GMAT Review (10th edition), #21
GMAT® questions are the property of the Graduate Management
Admission Council® and are reprinted with its permission.*

To answer this question, first identify the conclusion:

The perceived threat of nuclear catastrophe decreases the willingness of people to postpone consumption for the sake of saving money.

The assumption must be closely tied to the conclusion. The only answer choice that supports and is closely tied to the conclusion is (C). Note the words **perceived** and **perception**, and the phrase **threat of nuclear catastrophe**.

Note also that this assumption does not assume too much. It merely makes explicit a logical step in the argument: when more nuclear-arms testing is done, people perceive a greater threat of a nuclear catastrophe.

Assumptions are never
stated in the argument.

Categories of Assumption

The correct answer to “Find an Assumption” questions almost always falls into one of the following four categories.

1. Assumptions can serve to fill in a logic gap.

Most assumptions simply fill in gaps in the logic or sequence of an argument. They provide additional premises that are needed to draw the conclusion, given the premises in the argument.

Amy is less than 5’6” tall. Therefore, she cannot have a successful career as a fashion model.

In order to make the logical leap from the premise in the first sentence of this argument to the conclusion in the second sentence, we must insert an additional premise. This unstated premise is an assumption.

The correct answer choice might be: **Successful fashion models must be 5’6” or taller.**

2. Assumptions can establish the feasibility of the premises of the argument.

These statements simply say that the premises in the argument can actually be true.

Uncle Gabe’s get-rich-quick scheme is simple: he will use a metal detector to find hidden treasures in the sand. Then he will sell the treasures to a local pawn broker.

This argument *assumes* that a metal detector actually can find treasures hidden in the sand. If this is not true, the premise that Gabe will find them with a metal detector is not feasible.

The correct answer choice might be: **Uncle Gabe’s metal detector is capable of detecting treasures hidden beneath the sand.**

Don't look for the perfect answer. Instead, focus on eliminating incorrect answers until you have only one choice left.

When provided with a cause and effect argument, look for an assumption that eliminates alternate models of causation.

3. Assumptions can eliminate alternate paths to the same end.

Many GMAT arguments contain linear logic paths: A, B, and C are true, therefore X is true. However, in simple linear paths, the speaker often ignores the possibility of a different path to the same end.

Girl Power magazine published an article proclaiming that one can lose up to 20 pounds a month by eating only soup. Kelly concludes that the best way for her to lose 40 pounds is to eat only soup for 2 months.

This conclusion ignores the many other (probably healthier) ways Kelly could lose 40 pounds. In other words, it *assumes* that there is no better way for her to lose weight than to eat soup.

The correct answer choice might be: **Kelly is unable to lose weight in another way.**

4. Assumptions can eliminate alternate models of causation.

Many GMAT arguments are simply statements of cause and effect. For example:

Researchers in the field have noticed that older antelope are more cautious. Therefore, they have concluded that the quality of caution increases with age in antelope.

This argument outlines a cause and effect relationship: **age causes increased caution.** However, the argument ignores the fact that antelope who are cautious may have a better chance of avoiding an attack by predators and may therefore live longer. In order for the conclusion to be valid, the researchers are *assuming* that this alternate model of causation is, in fact, untrue.

The correct answer choice might be: **Increased caution does not enable antelope to live longer.**

Critical Reasoning

Now that you have completed your study of FIND AN ASSUMPTION questions, it is time to test your skills on passages that have actually appeared on real GMAT exams over the past several years.

The problem set that follows is composed of Critical Reasoning passages from two books published by GMAC (Graduate Management Admission Council):

The Official Guide for GMAT Review, 11th Edition (pages 32-38 & 468-504)

The Official Guide for GMAT Verbal Review (pages 116-142)

Continue to diagram each argument, but this time, you should answer each question. Also, try to identify which type of assumption is represented by the correct answer.

Note: Problem numbers preceded by “D” refer to questions in the Diagnostic Test chapter of *The Official Guide for GMAT Review, 11th Edition* (pages 32-38).

Find an Assumption

11th Edition: D28, 2, 14, 25, 32, 47, 50, 52, 59, 77, 80, 81, 89, 92, 96, 97, 109, 110

Verbal Review: 7, 13, 34, 45, 51, 56, 63, 75

Type 2: Draw a Conclusion

These questions ask you to draw a conclusion based on a passage of given premises. GMAT conclusions are arguable statements that are supported by the premises of the argument. If you are asked to draw a conclusion, you must be able to support it with only the premises given; the conclusion should not require you to make any additional assumptions at all.

The conclusion you select should:

- (1) never go far beyond the premises AND
- (2) not contain extreme words or phrases, such as ALWAYS, NEVER, or ALL.

The cost of producing radios in Country Q is ten percent less than the cost of producing radios in Country Y. Even after transportation fees and tariff charges are added, it is still cheaper for a company to import radios from Country Q to Country Y than to produce radios in Country Y.

Be careful not to
conclude too much!

The statements above, if true, best support which of the following assertions?

- (A) Labor costs in Country Q are ten percent below those in Country Y.
- (B) Importing radios from Country Q to Country Y will eliminate ten percent of the manufacturing jobs in Country Y.
- (C) The tariff on a radio imported from Country Q to Country Y is less than ten percent of the cost of manufacturing the radio in Country Y.
- (D) The fee for transporting a radio from Country Q to Country Y is more than ten percent of the cost of manufacturing the radio in Country Q.
- (E) It takes ten percent less time to manufacture a radio in Country Q than it does in Country X.

*The Official Guide for GMAT Review (11th edition), #104
GMAT® questions are the property of the Graduate Management
Admission Council® and are reprinted with its permission.*

The premises in this argument are:

- 1. Country Q production cost is 10% LESS than Country Y production cost.
- 2. Even with transportation and tariff fees, it is still cheaper to produce radios in Country Q and then import them into Country Y.

Therefore, you are looking for a conclusion that follows naturally from this information. Eliminate (A), since the argument describes production costs in general, not specifically those associated with labor. Eliminate (B), since the argument does not discuss jobs at all. Eliminate (D), since we have no evidence to support this relationship. Eliminate (E), since the passage does not discuss production time at all. We are left with (C).

QUESTION TYPES STRATEGY

Alternately, it is often helpful to use real numbers to make sense of arguments that contain statistics. For example, let's say that it costs \$100 to produce a radio in Country Y.

Therefore, it costs \$90 to produce a radio in Country Q. If, after tariffs and transportation costs, it *still* costs less than \$100 to produce a radio in Country Q, then tariff and transportation costs must be *less than \$10* (\$100 - \$90). Since 10 is 10% of 100, the tariff on a radio is less than 10% of the cost of manufacturing the radio in Country Y.

	Y	Q
Production	\$100	\$90
Tax & Tariff	-	t
TOTAL COST	\$100	$\$90 + t$

$$\$100 > \$90 + t$$

$$10 > t$$

Use real numbers to make sense of statistics. Always pick 100 when dealing with percents.

Note that (C) simply summarizes the statistical data you have been given. This is not uncommon on the GMAT. GMAT conclusions NEVER go far beyond the premises. In fact, they often don't go beyond the premises at all. They simply summarize or restate the information supplied in the premises.

Critical Reasoning

Now that you have completed your study of DRAW A CONCLUSION questions, it is time to test your skills on passages that have actually appeared on real GMAT exams over the past several years.

The problem set that follows is composed of Critical Reasoning passages from two books published by GMAC (Graduate Management Admission Council):

The Official Guide for GMAT Review, 11th Edition (pages 32-38 & 468-504)

The Official Guide for GMAT Verbal Review (pages 116-142)

Diagram each argument and answer the question by drawing a conclusion that is supported by the premises in your diagram.

Note: Problem numbers preceded by “D” refer to questions in the Diagnostic Test chapter of *The Official Guide for GMAT Review, 11th Edition* (pages 32-38).

Draw a Conclusion

11th Edition: D24, D31, 6, 19, 31, 35, 46, 51, 56, 57, 60, 66, 71, 75, 76, 95, 101, 104

Verbal Review: 20, 44, 52, 57, 59, 64, 74, 77

Type 3: Strengthen the Conclusion: S-W-Slash Chart

These questions ask you to provide additional support for a given conclusion.

A premise that strengthens the conclusion should:

- (1) fix a potential weakness of the conclusion OR
- (2) introduce additional supporting evidence.

Toughened hiring standards have not been the primary cause of the present staffing shortage in public schools. The shortage of teachers is primarily caused by the fact that in recent years teachers have not experienced any improvements in working conditions and their salaries have not kept pace with salaries in other professions.

Which of the following, if true, would most support the claims above?

- (A) Many teachers already in the profession would not have been hired under the new hiring standards.
- (B) Today more teachers are entering the profession with a higher educational level than in the past.
- (C) Some teachers have cited higher standards for hiring as a reason for the current staffing shortage.
- (D) Many teachers have cited low pay and lack of professional freedom as reasons for their leaving the profession.
- (E) Many prospective teachers have cited the new hiring standards as a reason for not entering the profession.

The Official Guide for GMAT Verbal Review, #31
 GMAT® questions are the property of the Graduate Management
 Admission Council® and are reprinted with its permission.

In this argument, the conclusion is that **the staffing shortage in public schools is due to poor working conditions and low salaries, not to the new hiring standards.**

W	A
S	B
	C
S	D
W	E

Evaluate each of the answer choices, using an S-W-Slash chart to identify whether each *strengthens* the conclusion (S), *weakens* the conclusion (W), or is *irrelevant* to the conclusion (—). (A) weakens the conclusion; it actually supports what the argument is trying to refute. (B) possibly strengthens the conclusion; people with higher education levels might be more likely to demand higher salaries and better working conditions. (C) is irrelevant to the conclusion; teachers' speculation about the reason for the staffing shortage does not provide evidence either way. (D) strengthens the conclusion; teachers who leave the profession have explicitly said that they are leaving because of low pay and lack of professional freedom (poor working conditions). (E) weakens the conclusion, indicating that the new hiring standards, and not low salaries and poor working conditions, represent the reason for the staffing shortage.

Eliminating incorrect
 answer choices can help
 you answer questions
 more quickly.

Only (B) and (D) strengthen the conclusion. (B) is a possible explanation for why teachers are demanding better working conditions and higher salaries, but it requires the assumption that people with a higher education level are more likely to demand better working conditions and higher salaries. (D) assumes nothing; it merely tells you that teachers *who have left the profession* (indicated by the word **their** in the answer choice) have given low pay and poor working conditions as explanations for leaving. Since (D) requires no assumptions or logical leaps on your part, it is the better answer.

The S-W-Slash chart is an essential tool for eliminating incorrect answer choices. It usually helps you narrow the possible answers down to two choices and prevents you from getting distracted by complicated wording in the question.

Before you analyze each answer choice, be sure to identify the conclusion of the argument.

Type 4: Weaken the Conclusion: S-W-Slash Chart

These questions ask you to weaken the given conclusion.

A premise that weakens the conclusion should:

- (1) expose a faulty assumption OR
- (2) introduce a piece of detracting evidence.

The ice on the front windshield of the car had formed when moisture condensed during the night. The ice melted quickly after the car was warmed up the next morning because the defrosting vent, which blows only on the front windshield, was turned on full force.

Which of the following, if true, most seriously jeopardizes the validity of the explanation for the speed with which the ice melted?

- (A) The side windows had no ice condensation on them.
- (B) Even though no attempt was made to defrost the back window, the ice there melted at the same rate as did the ice on the front windshield.
- (C) The speed at which ice on a window melts increases as the temperature of the air blown on the windshield increases.
- (D) The warm air from the defrosting vent for the front windshield cools rapidly as it dissipates throughout the rest of the car.
- (E) The defrosting vent operates efficiently even when the heater, which blows warm air toward the feet or faces of the driver and passengers, is on.

*The Official Guide for GMAT Review (10th edition), #7
GMAT® questions are the property of the Graduate Management
Admission Council® and are reprinted with its permission.*

In this argument, the conclusion is that the defrosting vent caused the ice on the front windshield to melt quickly.

W S	A
	B
	C
	D
	E

Evaluate each of the answer choices using an S-W-Slash chart. (C) actually supports the conclusion. (A), (D), and (E) neither support nor weaken the conclusion; they simply present irrelevant information. Only (B) weakens the conclusion by exposing a faulty assumption. The argument assumes that the ice melted quickly because of the defrosting vent; however, the ice on the back windshield, where there was no defrosting vent, melted just as quickly.

Eliminate answer choices that support the conclusion.

Critical Reasoning

Now that you have completed your study of STRENGTHEN and WEAKEN questions, it is time to test your skills on passages that have actually appeared on real GMAT exams over the past several years.

The problem set that follows is composed of Critical Reasoning passages from two books published by GMAC (Graduate Management Admission Council):

The Official Guide for GMAT Review, 11th Edition (pages 32-38 & 468-504)

The Official Guide for GMAT Verbal Review (pages 116-142)

Diagram each argument and answer the question by using an S-W-Slash Chart. Remember, begin by identifying whether each answer choice *strengthens the conclusion*, *weakens the conclusion*, or *neither strengthens nor weakens the conclusion*. Then, eliminate answer choices based on your chart.

Note: Problem numbers preceded by “D” refer to questions in the Diagnostic Test chapter of *The Official Guide for GMAT Review, 11th Edition* (pages 32-38).

Strengthen the Conclusion

11th Edition: D25, D27, D32, 7, 9, 13, 16, 26, 28, 30, 36, 37, 41, 43, 53, 54, 63, 67, 69, 73, 103, 112, 114, 117, 123

Verbal Review: 1, 3, 16, 22, 25, 31, 33, 35, 36, 53, 55, 67, 68, 69, 70, 71, 80

Weaken the Conclusion

11th Edition: D18, D20, D23, D26, D30, D34, 1, 3, 10, 12, 15, 17, 18, 20, 23, 27, 33, 38, 39, 40, 42, 44, 48, 55, 61, 62, 64, 65, 68, 72, 78, 79, 83, 84, 85, 86, 88, 91, 93, 98, 100, 102, 105, 107, 111, 113, 115, 116, 118, 120, 121, 122, 124

Verbal Review: 4, 6, 11, 15, 17, 18, 19, 21, 24, 26, 27, 28, 29, 32, 37, 39, 40, 46, 47, 48, 49, 50, 54, 58, 60, 62, 76, 79, 81

Type 5: Analyze the Argument Structure

These questions hinge on your ability to understand how GMAT arguments are structured. Typically these questions present pieces of the argument in boldfaced type and ask you to analyze the role that these pieces play in the structure of the argument. Recently, this type of question has become significantly more common.

When answering questions of this type, diagram the argument, so that you can identify the conclusion before you evaluate the boldfaced portions. Then, decide how the boldfaced sections of the argument relate to the conclusion and to each other, evaluating one portion at a time.

Consumer advocate: It is generally true, at least in this state, that lawyers who advertise a specific service charge less for that service than lawyers who do not advertise. It is also true that **each time restrictions on the advertising of legal services have been eliminated, the number of lawyers advertising their services has increased and legal costs to consumers have declined in consequence**. However, eliminating the state requirement that legal advertisements must specify fees for specific services would almost certainly increase rather than further reduce consumers' legal costs. Lawyers would no longer have an incentive to lower their fees when they begin advertising and **if no longer required to specify fee arrangements, many lawyers who now advertise would increase their fees**.

This problem type has recently become much more common.

In the consumer advocate's argument, the two portions in *boldface* play which of the following roles?

- (A) The first is a generalization that the consumer advocate accepts as true; the second is presented as a consequence that follows from the truth of that generalization.
- (B) The first is a pattern of cause and effect that the consumer advocate argues will be repeated in the case at issue; the second acknowledges a circumstance in which that pattern would not hold.
- (C) The first is a pattern of cause and effect that the consumer advocate predicts will not hold in the case at issue; the second offers a consideration in support of that prediction.
- (D) The first is evidence that the consumer advocate offers in support of a certain prediction; the second is that prediction.
- (E) The first acknowledges a consideration that weighs against the main position that the consumer advocate defends; the second is that position.

The Official Guide for GMAT Verbal Review, #82

GMAT® questions are the property of the Graduate Management Admission Council® and are reprinted with its permission.

QUESTION TYPES STRATEGY

In this argument, the conclusion is that **eliminating the requirement that legal advertisements must specify fees would increase consumer's legal costs**. This is the point the consumer advocate is trying to argue, or defend. It is the final logical step in the consumer advocate's reasoning.

Evaluate the portions of the argument in boldface as to how they relate to this conclusion. First,

...each time restrictions on the advertising of legal services have been eliminated, the number of lawyers advertising their services has increased and legal costs to consumers have declined in consequence.

- Is this: (A) a generalization that the consumer advocate accepts as true,
 (B) a pattern of cause and effect that will be repeated,
 (C) a pattern of cause and effect that will NOT hold true,
 (D) evidence in support of the increase in legal costs, OR
 (E) a consideration that weighs against the increase in legal costs?

You can eliminate (B) and (D). The consumer advocate argues that this pattern will NOT hold true in this case and notes that the pattern does not support the predicted increase in legal costs.

Then, consider the second boldfaced portion. Do not bother to evaluate the answer choices you have already eliminated.

...if no longer required to specify fee arrangements, many lawyers who now advertise would increase their fees.

- Is this: (A) a consequence of the generalization described in the first boldfaced portion,
 (C) a consideration that supports the predicted increase in legal costs, OR
 (E) the conclusion itself?

Clearly, (E) is incorrect. This is not the ultimate conclusion of the passage. In regards to choice (A), the second boldfaced portion actually is not a consequence of the generalization described in the first boldfaced portion; it contradicts this generalization. Therefore, the correct answer is (C).

For "Analyze the Argument Structure" questions, it is critical that you begin by diagramming the argument and identifying the conclusion. Then, analyze how each boldfaced portion of the passage relates to the conclusion, one portion at a time. Remember that sometimes one of the boldfaced portions will be the conclusion itself.

Note that not all "Analyze the Argument Structure" questions involve comparing boldfaced portions. Sometimes, you are asked how an author develops an argument or what roles different individuals play in a given argument. In each instance, diagramming (with a particular focus on locating the conclusion) is the key to understanding how an argument is structured.

Evaluate the structure
one portion at a time.

Critical Reasoning

Now that you have completed your study of ANALYZE THE ARGUMENT STRUCTURE questions, it is time to test your skills on passages that have actually appeared on real GMAT exams over the past several years.

The problem set that follows is composed of Critical Reasoning passages from two books published by GMAC (Graduate Management Admission Council):

The Official Guide for GMAT Review, 11th Edition (pages 468-504)

The Official Guide for GMAT Verbal Review (pages 116-142)

Diagram each argument and answer the question by analyzing the structure of the passage.

Analyze the Argument Structure

11th Edition: 87, 90, 94

Verbal Review: 82

Minor Question Types

Aside from the five major question types, there are a variety of minor question types that the GMAT uses for Critical Reasoning passages. These are outlined below:

Explain an event or discrepancy:

The question generally poses two seemingly contradictory premises and asks you to find the answer choice that best reconciles them.

Example: **Which of the following statements, if true, would best explain the sudden drop in temperature?**

Make an inference about a passage of premises:

The question asks you to make an informed deduction about a passage of premises. A GMAT inference is very moderate and rarely goes far beyond the premises. You should generally infer so little that the inference seems obvious. This is very similar to the strategy for answering Draw a Conclusion questions.

Example: **Which of the following can be correctly inferred from the statements above?**

Evaluate the conclusion:

The question asks you to evaluate the validity of a given conclusion or to suggest a way in which one could efficiently evaluate a given conclusion. You should generally consider assumptions upon which the argument is based in choosing your answer.

Example: **Which of the following is most likely to yield information that would help to evaluate the effectiveness of the new method?**

Resolve a problem:

The question asks you to solve a problem posed by a passage of premises. You should use the specific details in the premises as the basis of your solution.

Example: **Which of the following would best counteract the drug's effects?**

Provide an example:

The question asks you to select a situation that best exemplifies the main point (the conclusion) of a given argument.

Example: **Which of the following illustrates the process described above?**

Restate the conclusion:

The question asks you to find the main point—the conclusion—of the passage. Use your diagram to locate the conclusion and choose the answer choice that restates it.

Example: **Which of the following statements best summarizes the main point of the argument above?**

Mimic the argument:

The question asks you to analyze the logical flow of an argument and then choose the answer choice that most closely mimics this line of reasoning.

Example: **Which of the following arguments is most similar to the line of reasoning in the argument above?**

Identifying the question type will help you apply an effective strategy.

Critical Reasoning

Now that you have completed your study of MINOR QUESTION TYPES, it is time to test your skills on passages that have actually appeared on real GMAT exams over the past several years.

The problem set that follows is composed of Critical Reasoning passages from two books published by GMAC (Graduate Management Admission Council):

The Official Guide for GMAT Review, 11th Edition (pages 32-38 & 468-504)

The Official Guide for GMAT Verbal Review (pages 116-142)

Diagram each argument and answer each question.

Note: Problem numbers preceded by “D” refer to questions in the Diagnostic Test chapter of *The Official Guide for GMAT Review, 11th Edition* (pages 32-38).

Explain an Event or Discrepancy

11th Edition: D19, D33, 4, 11, 22, 45, 49, 74, 82, 99, 119

Verbal Review: 9, 23, 61, 66, 72, 73

Make an Inference about Premises

11th Edition: 21, 34, 70

Verbal Review: 2, 12, 14, 43

Evaluate the Conclusion

11th Edition: D21, D22, D29, 5, 24, 106, 108

Verbal Review: 41, 65, 78

Resolve a Problem

11th Edition: 8, 58

Verbal Review: 30, 10

Provide an Example

Verbal Review: 5, 38

Restate the Conclusion

11th Edition: 29

Verbal Review: 42

Mimic the Argument

Verbal Review: 8

g

**Reading
Comprehension**

g

Chapter 4

f

CRITICAL REASONING &
READING COMPREHENSION

LONG vs.
SHORT

In This Chapter . . .

g

- Long Passages: An Overview
- The Skeletal Sketch
- Sketching Real Examples
- Short Passages: An Overview
- The Detail Map
- Detail Maps for Real Examples

LONG VS. SHORT

GMAT Reading Comprehension passages come in two basic forms: LONG and SHORT. Differentiating your reading strategy based on these two forms is the primary key to Reading Comprehension success.

Each GMAT reading passage is accompanied by line numbers, making it easy to identify a passage as either LONG or SHORT. On the real GMAT CAT exam, a long passage is anything over 50 lines, and a short passage is anything under 50 lines. (Note that this number is strictly for the real computer-based test; in *The Official Guide for GMAT Review, 11th Edition* and *The Official Guide for GMAT Verbal Review*, the long-short line cutoff is 35. Other practice guides and simulated software programs may contain different cutoff numbers.)

You can expect to see 4 Reading Comprehension passages on the GMAT. Each passage will typically be accompanied by about 3 to 5 questions, for a total of about 14 Reading Comprehension questions. Due to the computerized format of the exam, the questions are presented ONE AT A TIME on the right side of the computer screen, while the complete reading passage remains on the left side of the screen throughout. Since questions are presented one at a time, and you cannot return to questions after skipping them, it is unfortunately not possible to read all the questions first before reading the passage. You must review the passage first.

Thus, the key to your success lies in HOW you read the passage the first time through, before knowing all of the questions.

On the CAT, you will only be able to see the first question before you read the passage.

Long Passages: An Overview

LONG passages are those that have more than 50 lines of text on the computer screen (easily seen by the accompanying line numbers). These passages average between 70 and 90 lines of text and are often accompanied by 4-5 questions, although this varies.

Note that although questions appear one at a time, the GMAT does inform you of how many questions will accompany a given passage. The top of each passage gives you this information (for example, the top of a given passage may read **questions 6 to 10**, so you know there are 5 questions that will accompany this passage).

Do not try to read an entire long passage before seeing the questions. Instead, skim the passage and create a Skeletal Sketch.

All passages on the GMAT relate to one of three topic areas: Social Science, Science, or Business. Although these topics can be interesting, the GMAT makes them as boring and tedious as possible by using dry, clinical language, replete with long, detail-laden sentences.

The basic problem with a LONG PASSAGE is that there is too much information to absorb in one sustained reading. Additionally, there is not enough time to outline the entire passage, with all its details and nuances. Moreover, without knowing what the questions are, it is impossible to know what to focus on in an initial reading. The solution is to create a SKELETAL SKETCH of the passage during your first reading. A Skeletal Sketch serves several purposes:

- (1) It fosters retention of the text by using writing to promote active reading.
- (2) It provides a general sketch of the text without getting bogged down in details.
- (3) It promotes a faster first reading of long, complex passages, so that more time can be spent on answering the questions.

The Skeletal Sketch

The creation of a Skeletal Sketch has several key elements:

- (1) Just as the top of a skeleton (the skull) is its most defined feature, so too the first paragraph of every long passage gives shape to the text. As such, your Skeletal Sketch requires a defined “skull.” In it, you should carefully outline the first paragraph, paying attention to all its major points.
- (2) The limbs of your Skeletal Sketch are simply the topic sentences of the remaining paragraphs. Each paragraph has one topic sentence that gives the main point of the paragraph. Generally, the topic sentence is the first or second sentence, although it can also be a combination of the two. The topic sentences should be organized as a bulleted list under the skeletal “skull.”
- (3) After sketching the topic sentence of a given paragraph, SKIM the rest, recording only key words. Key words include names, places, and terms. **You should not read these sections.** In fact, reading them is often a bad idea, since you can get lost in the details, which takes you away from the purpose of your sketch: to understand the overall structure of the passage. This is where you can save much of your time.

How is the Skeletal Sketch used in answering the questions?

The Skeletal Sketch provides ready-made answers to all GENERAL question types. These are questions that pertain to the main idea of the passage, the purpose of the passage, and the structure or form of the passage, as well as questions that relate to the author's style and objectives. These general questions can be answered directly by reviewing your Skeletal Sketch.

The Skeletal Sketch also provides a search tool for answering all SPECIFIC question types. These are detail-oriented questions, which can only be answered by returning to the text of the passage. Using the limbs of your skeletal sketch, you can determine which paragraph you need to read in order to find a particular detail.

Using your sketch to answer questions will be discussed in the next section on Question Types.

A skeletal sketch allows you to read each section of the passage only when you are answering a question that pertains to it.

Sketching Real Examples

Sketching is a powerful strategy that is best learned by repeated practice with REAL GMAT reading passages. The following examples provide model Skeletal Sketches for LONG passages taken from *The Official Guide for GMAT Review, 10th edition* and *The Official Guide for GMAT Verbal Review*.

PASSAGE 1

Read the first paragraph and take notes. Then jot down the topic sentences of the subsequent paragraphs, along with key words.

Two divergent definitions have dominated sociologists' discussions of the nature of ethnicity. The first emphasizes the primordial and unchanging character of ethnicity. In this view, people have an essential need for belonging that is satisfied by membership in groups based on shared ancestry and culture. A different conception of ethnicity de-emphasizes the cultural component and defines ethnic groups as interest groups. In this view, ethnicity serves as a way of mobilizing a certain population behind issues relating to its economic position. While both of these definitions are useful, neither fully captures the dynamic and changing aspects of ethnicity in the United States. Rather, ethnicity is more satisfactorily conceived of as a process in which preexisting communal bonds and common cultural attributes are adapted for instrumental purposes according to changing real-life situations.

One example of this process is the rise of participation by Native American people in the broader United States political system since the Civil Rights movement of the 1960's. Besides leading Native Americans to participate more actively in politics (the number of Native American legislative officeholders more than doubled), this movement also evoked increased interest in tribal history and

traditional culture. Cultural and instrumental components of ethnicity are not mutually exclusive, but rather reinforce one another.

The Civil Rights movement also brought changes in the uses to which ethnicity was put by Mexican American people. In the 1960's, Mexican Americans formed community-based political groups that emphasized ancestral heritage as a way of mobilizing constituents. Such emerging issues as immigration and voting rights gave Mexican American advocacy groups the means by which to promote ethnic solidarity. Like European ethnic groups in the nineteenth-century United States, late-twentieth-century Mexican American leaders combined ethnic with contemporary civic symbols. In 1968 Henry Cisneros, later mayor of San Antonio, Texas, cited Mexican leader Benito Juarez as a model for Mexican Americans in their fight for contemporary civil rights. And every year, Mexican Americans celebrate Cinco de Mayo as fervently as many Irish American people embrace St. Patrick's Day (both are major holidays in the countries of origin), with both holidays having been reinvented in the context of the United States and linked to ideals, symbols, and heroes of the United States.

The Official Guide for GMAT Review (10th edition), page 388

GMAT® questions are the property of the Graduate Management Admission Council® and are reprinted with its permission.

The following is a Skeletal Sketch of the preceding passage:

*Two views of ethnicity:

1. Primordial and unchanging view: people have essential need for belonging, satisfied by group based on shared ancestry/culture
2. Interest groups view: de-emphasizes cultural component, mobilizes group behind economic issues

*Both views useful but neither captures ethnicity in US

*Better: Ethnicity is PROCESS in which preexisting bonds + culture are adapted for use in changing real-life situations

You should have the most detail in the skull of your sketch.

→ Example: Rise of participation by Native Americans in US politics since Civil Rights movement in 1960's
POLITICS, TRIBAL HISTORY, REINFORCE

→ Civil Rights movement caused change in Mexican-American use of ethnicity
IMMIGRATION, VOTING RIGHTS, EUROPEANS, CISNEROS, JUAREZ, CINCO DE MAYO, IRISH-AMERICANS, ST. PATRICK'S DAY

Notice that the “skull” of the sketch—the boxed section—includes the most detail, as it carefully outlines the major points of the first paragraph. The skull of this passage, as is often the case, closely resembles a GMAT argument (with premises and a conclusion).

The limbs of the sketch—one for the second paragraph and one for the third paragraph—are each very concise, consisting only of a topic sentence and key words.

PASSAGE 2

Caffeine, the stimulant in coffee, has been called "the most widely used psychoactive substance on Earth." Snyder, Daly, and Bruns have recently proposed that caffeine affects behavior by countering the activity in the human brain of a naturally occurring chemical called adenosine. Adenosine normally depresses neuron firing in many areas of the brain. It apparently does this by inhibiting the release of neurotransmitters, chemicals that carry nerve impulses from one neuron to the next. Like many other agents that affect neuron firing, adenosine must first bind to specific receptors on neuronal membranes. There are at least two classes of these receptors, which have been designated A_1 and A_2 . Snyder et al propose that caffeine, which is structurally similar to adenosine, is able to bind to both types of receptors, which prevents adenosine from attaching there and allows the neurons to fire more readily than they otherwise would.

For many years, caffeine's effects have been attributed to its inhibition of the production of phosphodiesterase, an enzyme that breaks down the chemical called cyclic AMP. A number of neurotransmitters exert their effects by first increasing cyclic AMP concentrations in target neurons. Therefore, prolonged periods at the elevated concentrations, as might be brought about by a phosphodiesterase inhibitor, could lead to a greater amount of neuron firing and, consequently, to behavioral stimulation. But Snyder et al point out that the caffeine concentrations needed to inhibit the production of

phosphodiesterase in the brain are much higher than those that produce stimulation. Moreover, other compounds that block phosphodiesterase's activity are not stimulants.

To buttress their case that caffeine acts instead by preventing adenosine binding, Snyder et al compared the stimulatory effects of a series of caffeine derivatives with their ability to dislodge adenosine from its receptors in the brains of mice. "In general," they reported, "the ability of the compounds to compete at the receptors correlates with their ability to stimulate locomotion in the mouse; i.e., the higher their capacity to bind at the receptors, the higher their ability to stimulate locomotion." Theophylline, a close structural relative of caffeine and the major stimulant in tea, was one of the most effective compounds in both regards.

There were some apparent exceptions to the general correlation observed between adenosine-receptor binding and stimulation. One of these was a compound called 3-isobutyl-1-methylxanthine (IBMX), which bound very well but actually depressed mouse locomotion. Snyder et al suggest that this is not a major stumbling block to their hypothesis. The problem is that the compound has mixed effects in the brain, a not unusual occurrence with psychoactive drugs. Even caffeine, which is generally known only for its stimulatory effects, displays this property, depressing mouse locomotion at very low concentrations and stimulating it at higher ones.

Remember, do not read any entire paragraphs other than the first.

The Official Guide for GMAT Verbal Review, page 44
GMAT® questions are the property of the Graduate Management Admission Council® and are reprinted with its permission.

The following is a Skeletal Sketch for the preceding passage:

- *S, D, B propose: Caffeine counters adenosine in human brain
- *Adenosine normally slows neuron firing by slowing release of neurotransmitters
- *Adenosine has to bind to receptors (A_1 and A_2) on neurons
- *Caffeine—structurally similar to adenosine—binds to receptors instead, allowing neurons to fire

The topic sentence of each paragraph is usually the first sentence.

- Previously: Caffeine slows production of phosphodiesterase, enzyme that breaks down AMP
NEUROTRANSMITTERS, AMP CONCENTRATION, BLOCK PHOSPHO ACTIVITY
- To bolster case, S, D, B tested caffeine derivatives to see if their ability to dislodge adenosine from its receptors stimulated mice
STIMULATE LOCOMOTION, THEOPHYLLINE, TEA
- Exceptions to correlation between adenosine-receptor binding + stimulation
IBMX, DEPRESSED LOCOMOTION, MIXED EFFECTS, PSYCHO-ACTIVE DRUGS

The “skull” of this sketch carefully reconstructs the scientists' hypothesis, which is explained in the first paragraph. The limbs are the summarized topic sentences and key words from each of the subsequent three paragraphs. Note that all the topic sentences are, as is usually the case, the first sentence of each paragraph.

Short Passages: An Overview

SHORT passages are those that have less than 50 lines of text on the computer screen (easily seen by the accompanying line numbers). These passages average between 30 and 45 lines of text and are generally accompanied by around 3 questions, although this varies.

SHORT passages are similar to LONG passages in several ways. First, all SHORT passages cover the same three topic areas—Social Science, Science, and Business. Second, SHORT passages still contain those tedious, dry, detail-laden GMAT sentences. Finally, despite their relative brevity, SHORT passages still contain too much information to absorb in one sustained reading.

However, in contrast to LONG passages, there is sufficient time to outline SHORT passages in their entirety. Instead of a Skeletal Sketch, then, you should employ a DETAIL MAP when you see a SHORT reading passage on the GMAT.

A DETAIL MAP serves several purposes:

- (1) It fosters retention of the text by using writing to promote active reading.
- (2) It provides the general structure of the text.
- (3) It outlines key details of the text, promoting a thorough first reading.

The Detail Map

The creation of a Detail Map has several key elements:

- (1) Read the topic sentence of the first paragraph completely. Then summarize it concisely and underline your summary sentence.
- (2) Continue reading the paragraph, one sentence at a time. These sentences are detail sentences which develop the major point given in the topic sentence. Summarize each detail sentence concisely, listing each one underneath the topic sentence.
- (3) Repeat this process for any subsequent paragraphs.

The Detail Map is designed to be thorough enough to provide answers to almost all Reading Comprehension question types. Thus, you will not need to look back in the passage to find answers very frequently. In some cases, however, you will need to return to the passage. Your detail sentences will then serve as pinpoint search tools for locating the exact place in the passage that will provide the answer to the question given.

Using your Detail Map to answer questions will be discussed further in the later section on Question Types.

For a short passage, you should read the entire passage and take notes.

Detail Maps for Real Examples

Using Detail Maps is best learned by repeated practice with REAL GMAT reading passages. The following examples provide model Detail Maps for SHORT passages taken from *The Official Guide for GMAT Review (11th Edition)*.

PASSAGE 3

Australian researchers have discovered electroreceptors (sensory organs designed to respond to electrical fields) clustered at the tip of the spiny anteater's snout. The researchers made this discovery by exposing small areas of the snout to extremely weak electrical fields and recording the transmission of resulting nervous activity to the brain. While it is true that tactile receptors, another kind of sensory organ on the anteater's snout, can also respond to electrical stimuli, such receptors do so only in response to electrical field strengths about 1,000 times greater than those known to excite electroreceptors.

Having discovered the electroreceptors, researchers are now investigating how anteaters utilize such a sophisticated sensory system. In one behavioral experi-

ment, researchers successfully trained an anteater to distinguish between two troughs of water, one with a weak electrical field and the other with none. Such evidence is consistent with researchers' hypothesis that anteaters use electroreceptors to detect electrical signals given off by prey; however, researchers as yet have been unable to detect electrical signals emanating from termite mounds, where the favorite food of anteaters live. Still, researchers have observed anteaters breaking into a nest of ants at an oblique angle and quickly locating nesting chambers. This ability to quickly locate unseen prey suggests, according to the researchers, that the anteaters were using their electroreceptors to locate the nesting chambers.

Your detail map should include topic sentences and supporting details for each paragraph in the passage.

The Official Guide for GMAT Review (11th edition), page 370
 GMAT® questions are the property of the Graduate Management
 Admission Council® and are reprinted with its permission.

The following is a Detail Map of the preceding SHORT passage:

Researchers: electroreceptors at tip of anteater's snout

- Discovery: Exposed small parts of snout to weak electric fields + recorded brain activity
- Tactile receptors on snout only respond to stronger fields

Investigation: How anteaters utilize electroreceptors

- Experiment: trained to distinguish water troughs by electric field
- Hypothesis: use receptors to detect signals given off by prey
- No signals detected yet from termites, though anteaters locate them very quickly

The two underlined summaries concisely capture the topic sentence of each paragraph. They are each followed by a list that summarizes the key details of each paragraph.

PASSAGE 4

Traditionally, the first firm to commercialize a new technology has benefited from the unique opportunity to shape product definitions, forcing followers to adapt to a standard or invest in an unproven alternative. Today, however, the largest payoffs may go to companies that lead in developing integrated approaches for successful mass production and distribution.

Producers of the Beta format for videocassette recorders (VCR's), for example, were first to develop the VCR commercially in 1974, but producers of the rival VHS (Video Home System) format proved to be more successful at forming strategic alliances with other producers and distributors to manufacture and market their VCR format. Seeking to

maintain exclusive control over VCR distribution, Beta producers were reluctant to form such alliances and eventually lost ground to VHS in the competition for the global VCR market.

Despite Beta's substantial technological head start and the fact that VHS was neither technically better nor cheaper than Beta, developers of VHS quickly turned a slight early lead in sales into a dominant position. Strategic alignments with producers of prerecorded tapes reinforced the VHS advantage. The perception among consumers that prerecorded tapes were more available in VHS format further expanded VHS's share of the market. By the end of the 1980's, Beta was no longer in production.

The main idea of a paragraph can be comprised of more than one sentence.

The Official Guide for GMAT Review (11th edition), page 354
 GMAT® questions are the property of the Graduate Management
 Admission Council® and are reprinted with its permission.

The following is a Detail Map of the preceding SHORT passage:

Past: First firm to commercialize product benefited by shaping product definition

Today: Advantage to companies leading in integrated strategy for mass production + distribution

1975: Beta developed first VCR

- Rival VHS more successful at strategic alliances w/producers + distributors
- Beta lost ground in global VCR market

Despite Beta's head start, VHS turned slight lead into dominant position

- VHS aligned with producers of prerecorded tapes to reinforce advantage
- Consumer Perception: VHS tapes more available
- Late 1980s: Beta is dead

Notice that, in this example, both sentences of the first paragraph combine to form the main topic. Thus, both are underlined.