



GMAT Verbal Section: Critical Reasoning

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Prepare for the Critical Reasoning section of the GMAT with strategies, tips, and practice questions in this chapter from the bestselling Exam Cram 2 series.

Terms You Need to Know

- Argument
- Assumption
- Conclusion
- Context
- Critical reasoning
- Discrepancy
- Hypothesis
- Inference
- Paradox
- Phenomenon
- Premise
- Relevance

Concepts You Need to Master

- Applying the scientific method
- Chain of reasoning
- Drawing conclusions/inferences based on information presented
- Identifying evidence and conclusion
- Identifying unwarranted assumptions
- Paraphrasing given material
- Recognizing errors in logic

The GMAT Critical Reasoning questions are meant to test your understanding of arguments and their components. An argument is a conclusion supported by evidence. Each Critical Reasoning question on the GMAT is based on a stimulus argument. (Sometimes there are two questions in a row that are based on a single argument.) The questions reward those who can recognize well-constructed arguments or spot flaws in arguments.

CAUTION

These questions are not knowledge questions. So, take all "facts" at face value and do not answer any questions based on whatever prior knowledge of the subject matter that you may have.

Argument

There are really only two parts to an argument: *evidence* and *conclusion*. A mere statement alone is neither evidence nor conclusion. For example, consider the following statement:

Steve wears glasses.

This statement, without anything more, is simply a statement. We don't know whether it is factual. We don't know whether the author of the statement is going to reason from this proposition toward a further conclusion, or whether this is the ultimate conclusion that the author is trying to support. We need context to determine whether this statement is evidence or conclusion, as follows:

Steve wears glasses.

People who wear glasses are smart.

Therefore, Steve is smart.

In the example, the original statement, "Steve wears glasses," is used as evidence. Note that we are not absolutely sure of the *truth* of the conclusion because we are not absolutely sure of the truth or falsity of the statement that people who wear glasses are smart. On the other hand, the *validity* of the argument is unassailable. An argument is valid when its conclusion is well supported by the evidence presented.

Alternatively, the original statement may be *supported by evidence* rather than *used as evidence*, as shown in the following example:

Steve is nearsighted.

People who are nearsighted wear glasses.

Therefore, Steve wears glasses.

Again, we are not 100% sure of the truth of the conclusion because at least one piece of evidence is questionable. As we are all aware, not all nearsighted people wear glasses. Some wear contacts; some have surgery. (Some drive very slowly in front of me on the freeway.) However, the argument is valid. And, it illustrates that the original statement, "Steve wears glasses," is neither evidence nor conclusion on its own, and can be either evidence or conclusion, given the proper context.

Note that both of the arguments include two pieces of evidence. This is a minimum for a properly constructed argument. If you try to create an argument with only one piece of evidence, you leave holes, called *assumptions*. For example

Socrates is a man.

Therefore, Socrates is mortal.

This one has been around for thousands of years. It includes an assumption.

TIP

Logicians define assumptions as suppressed premises because they call a piece of evidence a premise.

The assumption, or unstated evidence, is that all men are mortal. (In Socrates' case, this was proven beyond doubt by a hemlock cocktail.) So, the complete argument looks like this:

Socrates is a man.

Men are mortal.

Therefore, Socrates is mortal.

We are able to derive the statement "Men are mortal," because it is the only statement that provides a connection between the unlike terms in the original, incomplete argument. Because Socrates appears in both the first piece of evidence and the conclusion, linked to two different words "man" and "mortal," we need a statement linking those two terms.

So, assumptions are important to understanding arguments, in that assumptions are simply unstated evidence.

We all make many assumptions every day. Some are *safe* or *warranted* assumptions. Others are a bit shaky. For instance, I can usually safely assume that other drivers on the road are going to stick to the convention of driving on the right side of the road. However, it is less safe to assume that a co-worker has the same political beliefs that I do or even likes the same sports teams.

Language

There are certain words that tend to trip up some test-takers. Here are the practical issues that surround the most common culprits:

- **Some:** This word literally means "at least one." If you read sentences so that you hear "at least one," you'll have an easier time following arguments. For example:

Some oak trees in the forest are taller than the tallest maple trees.

Becomes:

At least one oak tree in the forest is taller than the tallest maple tree.

- **Or:** To a logician, there are two kinds of "or": *inclusive* and *exclusive*. An *exclusive or* means A or B *but not both*. An *inclusive or* means A or B *or both*. On the GMAT, *or* is always inclusive. For example:

"Steve is taking Katie *or* Kara along to the library" means that Steve is taking either Katie or Kara, or both, to the library.

On the GMAT, an *exclusive or* will have the words "but not both" added. This is actually quite rare.

- **Phenomenon:** The word *phenomenon* (plural: *phenomena*) often gives test-takers pause. It simply means "thing." All you have to do is substitute "thing" for "phenomenon" in any sentence and you have not altered the meaning at all. For example

Researchers have observed many unusual *phenomena* at the crash site.

Becomes:

Researchers have seen many unusual *things* at the crash site.

Note that we also paraphrased "observed" to "seen." It is a good idea to simplify the language of the arguments and question stems as much as you can without changing the meaning or structure.

Question Types

The GMAT tests your understanding of arguments with several question formats, including: Conclusion (Inference), Assumption, Weakening/ Strengthening, Evaluation, Flaw, Paradox, and Parallel Structure.

Conclusion (Inference)

An *inference* is simply a type of conclusion. Although the GMAT often asks conclusion questions that require you to choose the answer that is a summary of the argument, the test makers may take you in unexpected directions and ask you to select a correct answer choice that is based on only some of the information provided. In either case, the validity of the argument is the important factor that leads you to only one answer choice.

Here is a *conclusion* question similar to those found on the GMAT:

- Increases in funding for police patrols often lower the rate of crimes of opportunity such as petty theft and vandalism by providing visual deterrence in high-crime neighborhoods. Levels of funding for police patrols in some communities are increased when federal matching grants are made available.

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

- Areas with little vandalism can never benefit from visual deterrence.
- Communities that do not increase their police patrols are at higher risk for crimes of opportunity late at night.
- Visual deterrence is the most effective means of controlling petty theft.
- Federal matching grants for police patrols lower the rate of crimes of opportunity in some communities.
- Only federal matching grants are necessary to reduce crime in most neighborhoods.

The correct answer, D, is a summary of the information provided; it is the logical end of a chain of reasoning started in the stimulus argument. A logical map of the chain might look something like this:

Increased funding → Increased visual deterrence → Lower crime

The last statement could be mapped as follows:

Federal grants → Increased patrol funds

Answer choice D makes the chain complete by correctly stating that federal grants can lead to lower crime in some communities. Now the logical chain appears thus:

Federal grants → Increased funding → Increased visual deterrence → Lower crime

The other answer choices may not be correctly inferred because they go beyond the scope of the argument. They may be objectively, factually correct, or they may be statements that you would tend to agree with. However, you are limited to the argument presented when choosing a correct answer.

Following are some other question stems that the GMAT uses to indicate conclusion/inference questions:

- If the above statements are true, which of the following must be true?
- Which of the following conclusions is best supported by the statements above?
- The statements above, if true, best support which of the following conclusions?
- The author is arguing that
- Which of the following conclusions can most properly be drawn from the information above?

CAUTION

Never say "never." Incorrect choices on Critical Reasoning questions often contain categorical language. Categorical language is language that is absolute, such as: never, always, all, none, only, and so on. Although it is possible that these words might appear in a

correct choice, you should avoid them unless you are certain of the correct answer.

Assumption

As mentioned earlier, an assumption is a piece of evidence that is not stated. It is something that the author of the argument is taking for granted when reasoning from the stated argument to the stated conclusion.

Here is an assumption question similar to those found on the GMAT:

- Traditionally, decision making by doctors that is carefully, deductively reasoned has been considered preferable to intuitive decision making. However, a recent study found that senior surgeons used intuition significantly more than did most residents or mid-level doctors. This confirms the alternative view that intuition is actually more effective than careful, methodical reasoning.

The conclusion above is based on which of the following assumptions?

- A. Methodical, step-by-step reasoning is inappropriate for making many real-life medical decisions.
- B. Senior surgeons have the ability to use either intuitive reasoning or deductive, methodical reasoning in making decisions.
- C. The decisions that are made by mid-level and entry-level doctors can be made as easily by using methodical reasoning as by using intuitive reasoning.
- D. Senior surgeons use intuitive reasoning in making the majority of their decisions.
- E. Senior surgeons are more effective at decision making than are mid-level doctors.

The correct answer, E, provides a missing link in the author's reasoning by making a connection from the evidence: that intuition is used more by senior surgeons than other, less-experienced doctors, and the conclusion: that, therefore, intuition is more effective. None of the other choices helps bridge this gap in the chain of reasoning. Although some of the other statements may be true, they are not responsive to the question. In fact, they mostly focus on irrelevant factors such as appropriateness, ease of application, ability, or whether the doctors in question use the technique in a majority of their decisions.

Following are some other question stems that GMAT uses to indicate assumption questions:

- The official's conclusion logically depends on which of the following assumptions?
- The conclusion above would be more reasonably drawn if which of the following were inserted into the argument as an additional premise?
- The argument above assumes that
- The conclusion drawn in the first sentence depends on which of the following assumptions?
- The conclusion of the above argument cannot be true unless which of the following is true?

CAUTION

Most of the wrong answer choices on the GMAT Critical Reasoning Section are wrong because they are irrelevant. The GMAT is set up to reward test-takers who have the ability to sort out relevant information from irrelevant information.

Weakening/Strengthening

The GMAT also includes questions that ask you to *weaken* or *strengthen* an argument. Most of the time, you are expected to choose the answer that either attacks or supports an assumption inherent in the argument. It is much less likely that you will find a correct answer that directly contradicts evidence that is stated in the argument. Our suggested technique is the same for both weakening and strengthening questions: First, identify the stated conclusion. Then, identify the stated evidence. Next, look for missing links that must be completed in order to create a strong chain of reasoning. If you are looking for the choice that weakens the argument, you need an answer choice that makes that assumption *less* likely to be true. Conversely, if you are trying to strengthen the argument, you need a choice that makes the assumption *more* likely to be true. The correct choice will not always completely disprove the conclusion or make it certain. There is a bit of subtlety required to get a maximum score on these questions.

Weakening

The following is an example of a weakening question:

- A drug that is very effective in treating some forms of cancer can, at present, be obtained only from the bark of the raynhu, a tree that is quite rare in the wild. It takes the bark of approximately 5,000 trees to make one pound of the drug. It follows, then, that continued production of the drug must inevitably lead to the raynhu's extinction.

Which of the following, if true, most seriously weakens the above conclusion?

- A. The drug made from raynhu bark is dispensed to doctors from a central authority.

- B. The drug made from the raynhu bark is expensive to produce.
- C. The leaves of the raynhu are used in a large number of medical products.
- D. The raynhu can be propagated from cuttings and cultivated by farmers.
- E. The raynhu generally grows in largely inaccessible places.

The correct answer, D, provides an alternate source of the raynhu bark. Even though the tree is rare in the wild, the argument is silent on the availability of cultivated trees. The author of the argument must be assuming that there are no raynhu trees other than those in the wild, in order to make the leap from the stated evidence to the conclusion that the raynhu is headed for extinction. So, to correctly weaken the argument, the test makers require you to attack an important assumption. The other answer choices all contain information that is irrelevant. Note that the correct choice does not make the conclusion of the argument impossible. In fact, it is possible that there may be domesticated raynhu trees and the species could still become extinct. Answer choice D is correct because it makes the conclusion about extinction less likely to be true.

Here are some other question stems that the GMAT uses to indicate weakening questions:

- Which of the following, if true, would most seriously undermine the conclusion drawn in the passage?
- Which of the following, if true, is the most appropriate reason for residents *not* to participate in the program?
- Which of the following, if true, would cast the most doubt on the accuracy of the group's contention?
- Which of the following, if it were discovered, would be pertinent evidence against the speculation above?
- Each of the following, if true, weakens the conclusion above EXCEPT

Strengthening

The following is an example of a strengthening question:

- Three years after the Hydraulic Falls Dam was built, none of the six fish species native to the area was still reproducing adequately in the river below the dam. Because the dam reduced the average temperature range of the water from approximately 40° to approximately 10°, biologists have hypothesized that sharp increases in water temperature must be involved in signaling the affected species to begin their reproduction activities.

Which of the following statements, if true, would most strengthen the scientists' hypothesis?

- A. The native fish species were still able to reproduce in nearby streams where the annual temperature range remains approximately 40°.
- B. Before the dam was built, the river annually overflowed its banks, creating temporary backwaters that were used as breeding areas for the local fish population.
- C. The lowest temperature ever recorded in the river prior to dam construction was 30°; whereas the lowest recorded river temperature after construction was completed has been 40°.
- D. Nonnative fish species, introduced after the dam was completed, have begun competing with the native species for food.
- E. Five of the species of fish native to the dam area are not known to be native to any other river.

The correct answer, A, most strengthens the conclusion that the scientists reached. It does so by showing that there is a control group. In other words, a similar population, not subjected to the same change as the population near the dam, did not experience the same type of result. This type of thinking is often referred to as the *scientific method*. It is often tested on the GMAT on problems that do not always involve scientific material. It is relevant to any time when there is a cause-effect relationship. Remember all that you learned about control groups and isolating variables. It will help you reason your way through this type of question.

Note that this question also adheres to the principal stated previously; you will usually attack or support assumptions when weakening or strengthening arguments. In this case, you are rewarded for choosing the answer that supports the assumption that the scientists must be making, which is, "If the dam had not altered the annual temperature variation in the river, the fish would be reproducing as they had before." In other words, they must be assuming that *nothing else* caused the lack of reproduction.

As with the weakening question above, the answer to this strengthening question does not *prove* the scientists' conclusion once and for all. It does make it *more likely* that the conclusion is correct.

Here are some question stems that GMAT uses to indicate strengthening question stems:

- Which of the following, if true, would most significantly strengthen the conclusion drawn by the researchers?
- Which of the following, if true, could proponents of the plan above most appropriately cite as a piece of evidence for the soundness of their plan?
- Which of the following, if true, would most support the claims above?
- Which of the following, if true, would most strongly support the position above?
- Which of the following, if true, most strongly supports the hypothesis?

Evaluation

Some GMAT Critical Reasoning questions ask you to *evaluate* an argument. These questions are closely related to assumption, weakening, and strengthening questions. The correct answer identifies a question that must be answered or information that must be gathered to determine how strong the stimulus argument is. The information will be related to an assumption that the author is making. For example:

- Although dentures produced through a new computer-aided design process will cost more than twice as much as ordinary dentures, they should still be cost effective. Not only will fitting time and X-ray expense be reduced, but the new dentures should fit better, diminishing the need for frequent refitting visits to the dentist's office.

Which of the following must be studied in order to evaluate the argument presented above?

- The amount of time a patient spends in the fitting process versus the amount of money spent on X-rays
- The amount by which the cost of producing dentures has declined with the introduction of the new technique for producing them
- The degree to which the use of the new dentures is likely to reduce the need for refitting visits when compared to the use of ordinary dentures
- The degree to which the new dentures are more carefully manufactured than are ordinary dentures
- The amount by which the new dentures will drop in cost as the production procedures become standardized and applicable on a larger scale

The correct answer, C, highlights an assumption in the stimulus argument. It shows that the author must be assuming that the reduction in refitting with the new dentures compared to ordinary dentures is significant in order to conclude that that difference will help offset an initial outlay that is twice as much. In other words, if you answer the question posed by answer choice C with "not much," the argument is weakened. If you answer it with "a tremendous amount," the argument is strengthened. The other answer choices are all irrelevant because no matter what the answers are, there is no impact on the relationship between the evidence presented in the stimulus argument and its conclusion.

Here are some other question stems that GMAT uses to indicate evaluation questions:

- Which of the following investigations is most likely to yield significant information that would help to evaluate the researcher's hypothesis?
- To evaluate the argument above, it would be most useful to compare X and Y with regard to which of the following characteristics?

Flaw

Another type of question that you will encounter asks you to *identify a flaw* in the stimulus argument. The question tells you that there is a problem with the logic of the argument. You just have to choose the answer that describes the flaw. Consider the following example:

- Some observers have taken the position that the recently elected judge is biased against men in divorce cases that involve child custody. But the statistics reveal that in 40% of such cases, the recently elected judge awards custody to the fathers. Most other judges award custody to fathers in only 20%–30% of their cases. This record demonstrates that the recently elected judge has not discriminated against men in cases of child custody.

The argument above is flawed in that it ignores the possibility that

- A large number of the recently elected judge's cases involve child custody disputes.
- Many judges find objectivity in child custody cases to be difficult to achieve.
- The recently elected judge is prejudiced against men in divorce cases that do not involve child custody issues.
- The majority of the child custody cases that have reached the recently elected judge's court have been appealed from a lower court.
- The evidence shows that men should have won custody in more than 40% of the recently elected judge's cases involving divorcing fathers.

The correct answer, E, points out a flaw in the argument. Specifically, it points out that the author of the argument was comparing the recently elected judge to other judges, not to the evidence presented in the recently elected judge's cases. In other words, the author of the argument made an unwarranted assumption that the recently elected judge did not rule against many men in custody battles where the evidence clearly favored the men. As with strengthening and weakening questions, the correct answer in flaw questions often involves unwarranted assumptions.

Here are some other question stems that GMAT uses to indicate a flaw question:

- The manufacturer's response is flawed as a refutation of the consumer advocate's argument because it
- Which of the following points to the most serious logical flaw in the author's argument?
- The argument is flawed in that it ignores the possibility that
- Which of the following indicates a flaw in the reasoning above?

CAUTION

Make sure that you answer the question that is being asked. Often there is something obvious about an argument that occurs to you as you read it, but the question is asking about something else entirely.

Paradox

Some GMAT questions ask you to resolve a *paradox*, which is an apparent contradiction or discrepancy. In other words, there are two facts that are both true, and yet they appear to be in direct conflict with one another. For example:

- Town Y is populated almost exclusively by retired people and has almost no families with small children. Yet Town Y is home to a thriving business specializing in the rental of furniture for infants and small children.

Which of the following, if true, best reconciles the seeming discrepancy described above?

- A. The business specializing in the rental of children's furniture buys its furniture from distributors outside of Town Y.
- B. The few children who do reside in Town Y all know each other and often stay over night at each other's houses.
- C. Many residents of Town Y who move frequently prefer to rent their furniture rather than buy it outright.
- D. Many residents of Town Y must provide for the needs of visiting grandchildren several weeks a year.
- E. Children's furniture available for rental is of the same quality as that available for purchase.

The correct answer, D, explains why a town of mostly retired residents might need to rent children's furniture. The other answer choices all contain irrelevant information. This further illustrates the fact that, on all question types, if you eliminate the irrelevant choices, the remaining choice will most likely be correct.

Here are some other question stems that GMAT uses to indicate paradox questions:

- Which of the following, if true, best reconciles the seeming discrepancy described above?
- Which of the following, if true, would best explain the opposition of X to the proposed law?
- Which of the following, if true, best explains the discrepancy above?
- Which of the following, if true, most helps to resolve the apparent paradox?
- Which of the following, if true, most helps to resolve the paradox outlined above?

TIP

Paraphrasing is a very important technique. We've found that our students can usually identify the credited response, even on questions that they answered incorrectly, if we paraphrase the argument and the question stem for them. The process of simplifying the language reveals that the actual ideas that are dressed up in complicated sentence structure and elevated vocabulary are usually fairly straightforward.

Parallel Structure

The last type of Critical Reasoning question that we'll cover is the *parallel structure* question. In this type of question, you must choose the answer that has the same structure as the stimulus argument. In other words, you have to find the argument that is analogous to the given argument in that it includes the same relationship between the evidence presented and the conclusion. For example:

- It is true that it is against international law to provide aid to certain countries that are building nuclear programs. But, if Russian companies do not provide aid, companies in other countries will.

Which of the following is most like the argument above in its logical structure?

- A. It is true that it is against United States policy to negotiate with kidnappers. But if the United States wants to prevent loss of life, it must negotiate in some cases.
- B. It is true that it is illegal to sell diamonds that originate in certain countries. But there is a long tradition in Russia of stockpiling diamonds.
- C. It is true that it is illegal for an attorney to participate in a transaction in which there is an apparent conflict of interest. But, if the facts are examined carefully, it will clearly be seen that there is no actual conflict of interest in the defendant's case.
- D. It is true that it is against the law to steal cars. But someone else certainly would have stolen that car if the defendant had not done so first.
- E. It is true that company policy forbids managers from making personal loans to employees without advance clearance from at least one vice president. But there have been many managers who have disobeyed this policy.

The correct answer, D, has the same structure as the stimulus argument. If you just replace "aid to developing nuclear powers" with "car theft," and "Russian companies" with the "defendant," it is essentially the same argument. Sometimes the parallel structure is easier to see if you use symbols to represent the terms of the argument: It is true that X is illegal. But, if Y doesn't do it, others will.

Granted, the stimulus argument is in the future tense and the credited answer is in the past tense. However, it certainly is *most* like the stimulus.

Note that the answer choices that deal with the United States and Russia are not credited. This is a common characteristic of the parallel structure questions. The answer choices that contain the same or similar terms as the stimulus argument are rarely correct.

Here are some other question stems that GMAT might use to indicate parallel structure questions:

- Which of the following arguments proceeds in the same way as the above argument?
- Which of the following conclusions is supported in the same way as the above conclusion?
- Which argument below contains the same flaw as the argument above?
- Which of the following has the most similar structure to the argument above?
- Each of the following is similar in structure to the above EXCEPT

A Note on Question Format

In addition to the straightforward multiple-choice format shown in the examples above, there are some additional formats that you may encounter on the GMAT. The logical relationships tested will be the same ones listed above. However, the question stems may vary slightly. The most common variations are *completion*, and *EXCEPT*.

A *completion* question can be a conclusion, assumption, or any other of the question types previously mentioned. It simply includes a blank that must be filled in by the correct answer choice.

For example:

- Which of the following best completes the passage below?

In a survey of high school students, three-fifths admitted to being at least somewhat dishonest. However, the survey may underestimate the proportion of students who are dishonest, because _____.

- some dishonest students taking the survey might have claimed to be honest on the survey
- some generally honest students taking the survey might have claimed on the survey to be dishonest
- some students who claimed on the survey to be at least a little dishonest may be very dishonest
- some students who claimed on the survey to be dishonest may have been answering honestly
- some people who are not high school students are probably at least somewhat dishonest

The correct answer, A, properly completes the passage because it provides a missing piece of evidence. So, this is actually just an assumption question with a bit of a format twist.

Similarly, an *EXCEPT* question will generally be one of the types discussed previously. However, the question stem will force you to use the process of elimination because you have to find the one choice that does not weaken, strengthen, and so on, the argument. For example:

- The beer industry is still very profitable and the projections are that it will remain so. In the United States this year, the total amount of beer sold by breweries has increased, even though the number of adults who drink beer has decreased.

Each of the following, if true, could explain the simultaneous increase in beer sales and decrease in the number of adults who drink beer EXCEPT:

- During this year, the number of women who have begun to drink beer is greater than the number of men who have quit drinking beer.
- The number of underage people who have begun to drink beer is greater than the number of adults who have quit drinking beer during the same period.
- During this year, the number of nondrinkers who have begun to drink beer is greater than the number of people who have quit drinking beer.
- The people who have continued to drink beer consume more beer per person than they have in the past.
- More of the beer made in the United States this year was exported to other countries than was the case last year.

The correct answer, A, is actually an irrelevant fact. In this case, the test makers framed the question in such a way that you are forced to choose the answer that has no bearing on the argument. Because the statistics refer to the number of adults who drink beer, without regard to sex, the fact that there has been a shift in the balance between male beer drinkers and female beer drinkers has no effect on the apparent conflict. Each of the other statements would help to explain the discrepancy. This question is just a paradox question with a formatting twist.

Putting It to Practice

Now that you've got a good feel for how to approach the critical reasoning questions found on the GMAT, try these sample questions.

Be sure to read the explanations to help you gain a better understanding of why the correct answer is correct.

Exam Prep Questions

Directions: Read the question and any accompanying information, and then select the best answer choice from those given.

1. The less frequently employees leave the office for a restaurant lunch each week, the fewer sick days they take. Even employees who reduce their number of restaurant lunches by only one per week take less sick time than those who eat lunch at restaurants every day. Therefore, if companies started to offer on-site cafeterias, the absentee rate in those companies would decrease significantly.

Which of the following, if true, most seriously weakens the argument above?

- A. Employees who eat in cafeterias sometimes make personal phone calls upon returning to their work areas.
 - B. Employees who are frequently absent are the least likely to eat in a company cafeteria.
 - C. Employees who eat in company cafeterias usually eat more healthy meals at home.
 - D. Employees who eat in company cafeterias use their working time no more productively than those who eat restaurant meals.
 - E. Employees who eat in company cafeterias tend to take more frequent breaks in the morning and afternoon than those who eat their lunch in restaurants.
2. Many people argue that alcohol advertising plays a crucial role in causing teenagers to start or continue drinking. In Finland, however, where there has been a ban on alcohol advertising since 1977, drinking is at least as prevalent among teenagers as it is in countries that do not ban such advertising.

Which of the following draws the most reliable conclusion from the information above?

- A. Alcohol advertising cannot be the only factor that affects the prevalence of drinking among teenagers.
 - B. Advertising does not play a role in causing teenagers to start or continue drinking.
 - C. Banning alcohol advertising does not reduce the consumption of alcohol.
 - D. More teenagers drink if they are not exposed to alcohol advertising than if they are.
 - E. Most teenagers who drank alcohol in 1977 did not stop when the ban on alcohol advertising was implemented.
3. A company's two divisions performed with remarkable consistency over the past 4 years; the heavy equipment division has accounted for approximately 25% of dollar sales and 45% of profits, and the consumer products division accounts for the balance.

Which of the following can be properly inferred regarding the past 4 years from the statement above?

- A. Total dollar sales for each of the company's divisions has remained roughly constant.
 - B. The heavy equipment division has faced stiffer competition in its markets than has the consumer products division.
 - C. The consumer products division has realized lower profits per dollar of sales than has the heavy equipment division.
 - D. The product mix offered by each of the company's divisions has remained unchanged.
 - E. Highly profitable products accounted for a higher percentage of the consumer products division's sales than those of the heavy equipment division.
4. The local board of education found that, because the current chemistry curriculum has little direct relevance to the real world, chemistry classes attract few high school students. So to attract students to chemistry classes, the school board proposed a curriculum that emphasizes principles of chemistry involved in producing and testing foam insulation.

Which of the following, if true, provides the strongest reason to expect that the proposed curriculum will be successful in attracting students?

- A. In the real world the production and testing of foam insulation is of major importance in the building trades.
 - B. The number of students interested in chemistry today is much lower than the number of students interested in chemistry 50 years ago.
 - C. Equipment that a large producer of foam insulation has donated to the school could be used in the proposed curriculum.
 - D. Knowledge of chemistry is becoming increasingly important in understanding the technology used in the real world.
 - E. Several fundamental principles of chemistry are involved in producing and testing foam insulation.
5. When five semi-trucks owned by Trustworthy Trucking crashed in the same week, Trustworthy Trucking ordered five new trucks from the same manufacturer. This decision surprised many in the trucking industry; ordinarily, when a product is involved in accidents, users become reluctant to buy that product.

Which of the following, if true, provides the best indication that Trustworthy Trucking's decision was logically well supported?

- A. Although during the previous year only one truck built by the same manufacturer crashed, competing manufacturers had a perfect safety record.
- B. The trucks owned by Trustworthy Trucking crashed due to driver error; but because of the excellent quality of the trucks there were no injuries.
- C. The federal government issued new guidelines for trucking companies in order to standardize safety requirements

governing inspections.

- D. Consumer advocates pressured two major trucking companies into purchasing safer trucks so that the public would be safer on the highways.
 - E. Many employees of the company that manufactured the trucks owned by Trustworthy Trucking had to be replaced because they found jobs with the competition.
6. Which of the following best completes the passage below?

Students gain prestige when they attend an Ivy League college. They want to be associated with something important and special. Allowing students with poor test scores to attend Ivy League colleges should not be encouraged because _____.

- A. Ivy League students currently represent a shrinking portion of the population of all college students
- B. continued enrollment at Ivy League colleges depends directly on the maintenance of an aura of exclusivity
- C. Ivy League students are concerned with the quality of education as well as the cost of tuition
- D. admitting students with poor test scores will allow Ivy League colleges to reduce the number of scholarships awarded to all students
- E. maintaining exclusivity is not necessarily a primary goal of Ivy League colleges

Questions 7–8 are based on the following:

Manufacturers R and S each have the same number of employees who work the same number of hours per week. According to records maintained by each manufacturer, the employees of Manufacturer R had more job-related accidents last month than did the employees of Manufacturer S. Therefore, employees of Manufacturer S are less likely to have job-related accidents than are employees of Manufacturer R.

7. Which of the following, if true, would most strengthen the conclusion above?
- A. Manufacturer R provides more types of health-care benefits than does Manufacturer S.
 - B. Manufacturer R paid more for new job-related medical claims than did Manufacturer S.
 - C. Manufacturer R holds more safety inspections than does Manufacturer S.
 - D. Manufacturer S maintains more accurate records than does Manufacturer R.
 - E. Manufacturer R makes products that are more hazardous for employees to produce than does Manufacturer S.
8. Which of the following, if true, would most weaken the conclusion above?
- A. The employees of Manufacturer R lost more time at work due to job-related accidents than did the employees of Manufacturer S.
 - B. Manufacturer S considered more types of accidents to be job-related than did Manufacturer R.
 - C. The employees of Manufacturer R were sick more often than were the employees of Manufacturer S.
 - D. The majority of job-related accidents at Manufacturer R involved a single machine.
 - E. Several employees of Manufacturer R each had more than one job-related accident.
9. The bionic prosthetic limb industry argues that because new prosthetics will not be developed unless high development costs can be recouped in later sales, the current 10 years of protection provided by patents should be extended in the case of newly developed prosthetics. However, in other industries, new product development continues despite high development costs, a fact that indicates that the extension is unnecessary.

Which of the following, if true, most strongly supports the bionic prosthetic limb industry's argument against the challenge made above?

- A. No industry other than the bionic prosthetic limb industry has asked for an extension of the 10-year limit on patent protection.
 - B. An existing patent for a prosthetic limb does not legally prevent bionic prosthetic limb companies from marketing alternative prosthetics, provided that they are sufficiently dissimilar to the patented prosthetic limb.
 - C. Much recent industrial innovation has occurred in products for which patent protection is often very ineffective.
 - D. Clinical testing of new prosthetic limbs, which occurs after the patent is granted and before the new limb can be marketed, often now takes as long as 5 years to complete.
 - E. There are several industries in which the ratio of research and development costs to revenues is higher than it is in the prosthetic limb industry.
10. In the past, most bus companies minimized bus weight to minimize fuel costs. The safest bus seats were heavy, and bus companies equipped their buses with few of these seats. Last year the seat that sold best to bus companies was the safest one—a clear indication that bus companies are assigning a higher priority to safety than to minimizing fuel costs.

Which of the following, if true, most seriously weakens the argument above?

- A. The best-selling bus seat two years ago was not the safest seat on the market.
- B. No bus company has announced that it would be making safe seating a higher priority this year.
- C. The price of fuel was higher this year than it had been in most of the years when the safest bus seat sold poorly.
- D. Due to increases in the cost of materials, all bus seats were more expensive to manufacture last year than in any previous year.
- E. Because of technological innovations, the safest bus seat on the market last year weighed significantly less than most other bus seats on the market.

Answers to Exam Prep Questions

1. **The best answer is B.** Offering on-site cafeterias might not produce significantly lowered absentee rates if employees who are frequently absent do not eat in on-site cafeterias. Answer choices A and E indicate that offering on-site cafeterias would have undesirable consequences, and answer choice D suggests that on-site cafeterias would fail to produce an added benefit, but none of these choices has any bearing on absenteeism. Answer choice C is irrelevant because it deals with eating meals at home.
2. **The best answer is A.** If alcohol advertising were the only factor affecting whether teenagers started or continued to drink, there would be a difference between the number of teenagers who drink in Finland and the number of teenagers who drink in other countries. Because there is no difference, alcohol advertising cannot be the only factor affecting the prevalence of drinking among teenagers. The remaining answer choices make some claim about the effects of alcohol advertising or the banning of such advertising, but no information about the effects of banning alcohol advertising, if any, is presented in the passage.
3. **The best answer is C.** Based on information given, the heavy equipment division made 45% of the profits on 25% of the dollar sales (), and the consumer products division made 55% of the profits on 75% of the dollar sales (). Thus, the consumer products division made a lower profit per dollar of sales. There is no information provided about total sales or competition, so answer choices A and B are incorrect. Likewise, neither the product mix nor the breakdown between highly profitable versus not highly profitable products is given, so answer choices D and E are incorrect.
4. **The best answer is A.** In order for the proposed curriculum change to attract students to chemistry classes, producing and testing foam insulation must be directly relevant to the real world. Answer choice A provides the best evidence for this. The remaining answer choices do not indicate why the new curriculum would be attractive to students.
5. **The best answer is B.** Trustworthy Trucking's decision would be most logically sound if the cause of the crashes was something other than deficiencies in the trucks, particularly if there is evidence that the trucks provided protection against injuries. The remaining answer choices either suggest that Trustworthy Trucking's decision was illogical or they do not provide a reason for Trustworthy Trucking's decision.
6. **The best answer is B.** The paragraph calls for an explanation for why allowing students with poor test scores to attend Ivy League colleges would be a bad idea. Answer choice B, which suggests that enrollment in Ivy League colleges depends on those colleges remaining special, provides such an explanation. Admitting students with poor test scores would likely lead to a reduction in the prestige associated with Ivy League colleges. The remaining answer choices are not supported by the context of, or the assumptions made in, the paragraph.
7. **The best answer is E.** The fact that Manufacturer R makes products that are more hazardous to produce might account for its higher incidence of job-related accidents. Therefore, this statement would support, or strengthen, the conclusion reached in the question. Health care benefits, paying for job-related medical claims, and accurate recordkeeping are irrelevant to a discussion of job-related accidents in this context, so answer choices A, B, and D are incorrect. If Manufacturer R held more safety inspections, the conclusion might actually be weakened, so answer choice C is incorrect.
8. **The best answer is B.** The information used to support the conclusion comes from the manufacturers own records. Because, however, answer choice B indicates that, as compared with Manufacturer R, Manufacturer S overstates the number of job-related accidents, answer choice B weakens the conclusion drawn. Answer choice A is a consequence that might be expected from the information given; it does not weaken the conclusion, so answer choice A is incorrect. Answer choice C contains irrelevant information, and answer choices D and E support the conclusion drawn.
9. **The best answer is D.** The bionic prosthetic limb industry's argument is best supported by an explanation of why the patent period sufficient for other industries is not sufficient for the prosthetic limb industry. Answer choice D indicates that clinical testing currently takes up half of the protection period and supports the argument for extending the protection period. None of the other answer choices offer a justifiable reason for extending the protection period.
10. **The best answer is E.** Because the safest seats were the lightest seats last year, buying them could actually be part of a strategy to minimize fuel costs, rather than an indication that bus companies are assigning a higher priority to safety. Answer choice A simply confirms that safety measures have improved. Answer choice B does not weaken the argument regarding a shift in priorities. Answer choices C and D do not effectively address the current seat-safety issue, so those choices are incorrect.