

Evaluating Conclusions
in the Light of
Known Facts

Booklet No. 12

Booklet #12

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EVALUATING CONCLUSIONS IN THE LIGHT OF KNOWN FACTS

This booklet is designed to provide practice questions in evaluating conclusions when you are given specific data to work with. Because this is one of the newest testing categories, we have included two different formats for this type of question. While we can't guarantee that either format will actually appear exactly in these styles on your exam, we are confident that the same skills and abilities will be required for both these practice questions and the actual exam questions.

We suggest you do the questions three at a time, consulting the answer key and then the Self Study Guide for any questions you may have missed. It's a good idea to try the questions again a week before the exam. Good luck!!

TYPE ONE: VALIDITY OF CONCLUSION QUESTIONS

In this type of question, you are first given a reading passage which describes a particular situation. The passage may be on any topic, as it's not your knowledge of the topic that is being tested, but your reasoning abilities. The passage is likely to detail several proposed courses of action and factors affecting these proposals. The reading passage is followed by a conclusion based on the facts in the passage, or a description of a decision taken regarding the situation. The conclusion is followed by a number of statements which have a possible connection to the conclusion. For each statement, you are to determine whether:

- (A) The statement proves the conclusion, in which case you would choose answer (A)
- (B) The statement supports the conclusion but does not prove it. If this is the case, choose (B).
- (C) The statement disproves the conclusion. If so, choose (C).
- (D) The statement weakens the conclusion but does not disprove it. If so, choose (D).
- (E) The statement has no relevance to the conclusion. If so, choose (E)

These questions can be very tricky, so remember to keep in mind exactly what is being said. Remember that the conclusion after the passage is to be accepted as the outcome of what actually happened, and that you're being asked to evaluate the impact each statement would have had on the conclusion. If you aren't sure what any of this means, try the first few questions and immediately consult the Self Study Guide to get a clearer picture of what is being asked.

I. In May of 1983, Mr. Bryant inherited a clothing store on Main Street in a small New England town. The store has specialized in selling quality men's and women's clothing since 1885. Business has been stable throughout the years, neither increasing or decreasing. He has an opportunity to buy two adjacent stores which would enable him to add a wider range and style of clothing. In order to do this, he would have to borrow a substantial amount of money. He also risks losing the goodwill of his present clientele.

CONCLUSION: On November 7, 1983 Mr. Bryant tells the owner of the two adjacent stores that he has decided not to purchase them. He feels that it would be best to simply maintain his present marketing position, as there would not be enough new business to support an expansion.

- (A) The statement proves the conclusion.
- (B) The statement supports the conclusion but does not prove it.
- (C) The statement disproves the conclusion.
- (D) The statement weakens the conclusion.
- (E) The statement is irrelevant to the conclusion.

1. A large new branch of the county's community college holds its first classes in September of 1983.
2. The town's largest factory shuts down with no indication that it will reopen.
3. The 1980 U.S. Census showed that the number of children per household dropped from 2.4 to 2.1 since the 1970 census.
4. Mr. Bryant's brother tells him of a new clothing boutique specializing in casual women's clothing which is opening soon.
5. Mr. Bryant's sister buys her baby several items for Christmas at Mr. Bryant's store.
6. The Town Council has just announced that the town is eligible for funding from a federal project designed to encourage the location of new businesses in the central districts of cities and towns.
7. Mrs. McIntyre, the president of the Town Council, brings Mr. Bryant a home baked pumpkin pie in honor of his store's 100th anniversary. They discuss the changes that have taken place in the town, and she comments on how his store has maintained the same look and feel over the years.
8. In October of 1983, Mr. Bryant's aunt lends him \$50,000.

II. A proposal has been put before the legislative body of a small European country to require air bags in all automobiles manufactured for domestic use in that country after 1989. The air bag, made of nylon or plastic, is designed to inflate automatically within a car at the impact of a collision, thus protecting front-seat occupants from being thrown forward. There has been much support of the measure from consumer groups, the insurance industry, key legislators, and the general public. The country's automobile manufacturers, who contend the new crash equipment would add up to \$1,000 to car prices and provide no more protection than existing seat belts, are against the proposed legislation.

CONCLUSION. On April 21, 1984, the legislature passed legislation requiring air bags in all automobiles manufactured for domestic use in that country after 1989.

- (A) The statement proves the conclusion
- (B) The statement supports the conclusion but does not prove it.
- (C) The statement disproves the conclusion.
- (D) The statement weakens the conclusion.
- (E) The statement is irrelevant to the conclusion.

9. A study has shown that 59% of car occupants don't use seat belts.

10. The country's Department of Transportation has estimated that the crash protection equipment would save up to 5,900 lives each year.

11. On April 27, 1984, Augusta Ranconi was named head of an advisory committee to gather and analyze data on the costs, benefits and feasibility of the proposed legislation on air bags in automobiles.

12. Consumer groups and the insurance industry accuse the legislature of rejecting passage of the regulation for political reasons.

13. A study by the Committee on Imports and Exports projected that the sales of imported cars would rise dramatically in 1989 because imported cars do not have to include air bags, and can be sold more cheaply.

14. Research has shown that air bags, if produced on a large scale, would cost about \$200 apiece, and would provide more reliable protection than any other type of seat belt.
15. Auto sales in 1981 have increased 3% over the previous year.
16. A Department of Transportation report in July of 1990 credits a drop in automobile deaths of 4,100 to the use of air bags.
17. In June of 1984, the lobbyist of the largest insurance company receives a bonus for her work on the passage of the air bag legislation.
18. In 1990, the stock in crash protection equipment has risen three fold over the previous year.

III. On a national television talk show, Marsha Means, a famous comedienne, has recently insulted the physical appearances of a famous actress and the dead wife of an ex-President. There has been a flurry of controversy over her comments, and much discussion of the incident has appeared in the press. Most of the comments have been negative. It appears that this time she might have gone too far. There have been cancellations of two of her five scheduled performances in the two weeks since the show was televised, and Marsha's been receiving a lot of negative mail. Because of the controversy, she has an interview with a national news magazine at the end of the week, and her press agent is strongly urging her to apologize publicly. She feels strongly that her comments were no worse than any other she's ever made, and that the whole incident will "blow over" soon. She respects her press agent's judgment, however, as his assessment of public sentiment tends to be very accurate.

CONCLUSION: Marsha does not apologize publicly, and during the interview she challenges the actress to a weight losing contest. For every pound the actress loses, Marsha says she will donate \$1 to the Cellulite Prevention League.

- (A) The statement proves the conclusion.
- (B) The statement supports the conclusion but does not prove it.

- (C) The statement disproves the conclusion.
- (D) The statement weakens the conclusion.
- (E) The statement is irrelevant to the conclusion.

19. Marsha's mother, who she is very fond of, is very upset about Marsha's comments.
20. Six months after the interview, Marsha's income has doubled.
21. Marsha's agent is pleased with the way Marsha handles the interview.
22. Marsha's sister has been appointed Treasurer of the Cellulite Prevention League. In her report she states that Marsha's \$12 contribution is the only amount that has been donated to the League in its first six months.
23. The magazine receives many letters commending Marsha for the courage it took for her to apologize publicly in the interview.
24. Immediately after the interview appears, another one of Marsha's performances is cancelled.
25. Due to a printers strike, the article was not published until the following week.

IV. The law making body of Country X must decide what to do about the issue of videotaping television shows for home use. There is currently no law against taping shows directly from the TV as long as the videotapes are not used for commercial purposes. The increasing popularity of pay TV and satellite systems, combined with the increasing number of homes that own videocassette recorders, has caused a great deal of concern in some segments of the entertainment industry. Companies that own the rights to films, popular television shows and sporting events feel that their copyright privileges are being violated, and they are seeking compensation or the banning of TV home videotaping. Legislation has been introduced to make it illegal to videotape television programs for home use. Separate proposed legislation is also pending that would continue to allow videotaping of TV shows for home use, but would place a tax of 10% on each videocassette that is purchased for home use. The income from that tax would then be proportionately distributed as royalties to those owning the rights to programs

being aired. A weighted point system coupled with the averaging of several national viewing ratings systems would be used to determine the royalties. There is a great deal of lobbying being done for both bills, as the manufacturers of videocassette recorders and videocassettes are against the passage of the bills.

CONCLUSION: The legislature of Country X rejects both bills by a wide margin.

- (A) The statement proves the conclusion.
- (B) The statement supports the conclusion but does not prove it.
- (C) The statement disproves the conclusion.
- (D) The statement weakens the conclusion.
- (E) The statement is irrelevant to the conclusion.

26. Country X's Department of Taxation hires 500 new employees to handle the increased paperwork created by the new tax on video-cassettes.

27. A study conducted by the country's most prestigious accounting firm shows that the cost of implementing the proposed new videocassette tax would be greater than the income expected from it.

28. It is estimated that 80% of all those working in the entertainment industry, excluding performers, own videocassette recorders.

29. The head of Country X's law enforcement agency states that legislation banning the home taping of TV shows would be unenforceable.

30. Financial experts predict that unless a tax is placed on video-cassettes, several large companies in the entertainment industry will have to file for bankruptcy.

EVALUATING CONCLUSIONS

The following questions are variations on the type of question you just had. It's important that you read the question very carefully to determine exactly what is required. We've included a variety of types of questions so that you become familiar with different formats that might be used on the actual exam. While it's important to pay attention to the format to determine what's being asked, the format itself won't be that much of a factor on the exam. What is important are the analytic skills required to solve the problems. These questions will give you more practice in that area. We suggest you do these one or two at a time, consulting the Self Study Guide as you go along. GOOD LUCK!

In the following question, select the choice that is most relevant to the conclusion.

31. 1) The Buffalo Bills football team is in second place in its division.
- 2) The New England Patriots are in first place in the same division.
- 3) There are two games left to play in the season, and the Bills will not play the Patriots again.
- 4) The New England Patriots won ten games and lost four games, and the Buffalo Bills have won eight games and lost six games.

CONCLUSION: The Buffalo Bills win their division.

- (A) The conclusion is proved by sentences 1-4.
- (B) The conclusion is disproved by sentences 1-4.
- (C) The facts are not sufficient to prove or disprove the conclusion.

In the following question, select the choice that is most relevant to the conclusion.

32. 1) On the planet of Zeinon there are only two different eye colors and only two different hair colors.
- 2) Half of those beings with purple hair have golden eyes.
- 3) There are more inhabitants with purple hair than there are inhabitants with silver hair.
- 4) One-third of those with silver hair have green eyes.

CONCLUSION: There are more golden-eyed beings on Zeinon than green-eyed ones.

- (A) The conclusion is proved by sentences 1-4.
- (B) The conclusion is disproved by sentences 1-4.
- (C) The facts are not sufficient to prove or disprove the conclusion.

In the following question, select the choice that is most relevant to the conclusion.

33. John and Kevin are leaving Amaranth to go to school in Bethany. They've decided to rent a small truck to move their possessions. Joe's Truck Rental charges \$100 plus 30¢ a mile. National Movers charges \$50 more but gives free mileage for the first 100 miles. After the first 100 miles they charge 25¢ a mile.

CONCLUSION: John and Kevin rent their truck from National Movers because it's cheaper.

- (A) The conclusion is proved by the facts in the above paragraph.
- (B) The conclusion is disproved by the facts in the above paragraph.
- (C) The facts are not sufficient to prove or disprove the conclusion.

For this question, select the choice that supports the information given in the passage.

34. Municipalities in Country X are divided into villages, towns and cities. A village has a population of 5,000 or less. The population of a town ranges from 5,001 to 15,000. In order to be incorporated as a city, the municipality must have a population over 15,000. If, after a village becomes a town, or a town becomes a city, the population drops below the minimum required (for example, the population of a city goes below 15,000), and stays below the minimum for more than ten years, it loses its current status, and drops to the next category. As soon as a municipality rises in population to the next category (village to town, for example), however, it is immediately reclassified to the next category.

In the 1960 Census, Plainfield had a population of 12,000. Between 1960 and 1970 Plainfield grew 10%, and between 1970 and 1980 Plainfield grew another 20%. The population of Springdale doubled from 1960 to 1970, and increased 25% from 1970 to 1980. The city of Smallville's population, 20,283, has not changed significantly in the last twenty years. Granton had a population of 25,000 people in 1950, and has decreased 25% in each ten year period since then. Ellenville had a population of 4,283 in 1950, and grew 5% in each ten year period since 1950.

In 1980:

- (A) Plainfield, Smallville and Granton are cities.
- (B) Smallville is a city, Granton is a town, and Ellenville is a village.
- (C) Springdale, Granton and Ellenville are towns.
- (D) Plainfield and Smallville are cities, and Ellenville is a town.

In the following question, select the choice that is most relevant to the conclusion.

35. A study was done for a major food distributing firm to determine if there is any difference in the kind of caffeine containing products used by people of different ages. A sample of one thousand people between the ages of twenty and fifty were drawn from selected areas in the country. They were divided equally into three groups. Those individuals who were 20-29 were designated Group A, those 30-39 were Group B, and those 40-50 were placed in Group C.

It was found that on the average, Group A drank 1.8 cups of coffee, Group B 3.1 and Group C 2.5 cups of coffee daily. Group A drank 2.1 cups of tea, Group B drank 1.2 and Group C drank 2.6 cups of tea daily. Group A drank 3.1 8-ounce glasses of cola, Group B drank 1.9 and Group C drank 1.5 glasses of cola daily.

CONCLUSION: According to the study, the average person in the 20-29 age group drinks less tea daily than the average person in the 40-50 age group, but drinks more coffee daily than the average person in the 30-39 age group drinks cola.

- (A) The conclusion is proved by the facts in the above paragraph.
- (B) The conclusion is disproved by the facts in the above paragraph.
- (C) The facts are not sufficient to prove or disprove the conclusion.

In the following question, select the choice that is most relevant to the conclusion.

- 36.
- 1) Mary is taller than Jane but shorter than Dale.
 - 2) Fred is taller than Mary but shorter than Steven.
 - 3) Dale is shorter than Steven but taller than Elizabeth.
 - 4) Elizabeth is taller than Mary but not as tall as Fred.

CONCLUSION: Dale is taller than Fred.

- (A) The conclusion is proved by sentences 1-4.
- (B) The conclusion is disproved by sentences 1-4.
- (C) The facts are not sufficient to prove or disprove the conclusion.

In the following question, select the choice that is most relevant to the conclusion.

- 37.
- 1) Main Street is between Spring Street and Glenn Blvd.
 - 2) Hawley Avenue is one block south of Spring Street and three blocks north of Main Street.
 - 3) Glenn Street is five blocks south of Elm and four blocks south of Main.
 - 4) All the streets mentioned are parallel to one another.

CONCLUSION: Elm Street is between Hawley Avenue and Glenn Blvd.

- (A) The conclusion is proved by the facts in sentences 1-4.
- (B) The conclusion is disproved by the facts in sentences 1-4.
- (C) The facts are not sufficient to prove or disprove the conclusion.

In the following question, select the choice that is most relevant to the conclusion.

- 38.
- 1) Train A leaves the town of Hampshire every day at 5:50 a.m. and arrives in New London at 6:42 a.m.
 - 2) Train A leaves New London at 7:00 a.m. and arrives in Kellogsville at 8:42 a.m.
 - 3) Train B leaves Kellogsville at 8:00 a.m., and arrives in Hampshire at 10:42 a.m.
 - 4) Due to the need for repairs, there is just one railroad track between New London and Hampshire.

CONCLUSION: It is impossible for Train A and Train B to follow these schedules without colliding.

- (A) The conclusion is proved by the facts in the above passage.
- (B) The conclusion is disproved by the facts in the above passage.
- (C) The facts are not sufficient to prove or disprove the conclusion.

SELF-STUDY GUIDE

SELF STUDY GUIDE

1. The answer is D. This statement weakens the conclusion, but does not disprove it. If a new branch of the community college opened in September, it could possibly bring in new business for Mr. Bryant. Since it states in the conclusion that Mr. Bryant felt there would not be enough new business to support the additional stores, this would tend to disprove the conclusion. Choice C would not be correct because it's possible that he felt that the students would not have enough additional money to support his new venture, or would not be interested in his clothing styles. It's also possible that the majority of the students already live in the area, so that they wouldn't really be a new customer population. This type of question is tricky, and can initially be very confusing, so don't feel badly if you missed it. Most people need to practice with a few of these types of questions before they feel comfortable recognizing exactly what they're being asked to do.
2. The answer is B. It supports the conclusion because the closing of the factory would probably take money and customers out of the town, causing Mr. Bryant to lose some of his present business. It doesn't prove the conclusion, however, because we don't know how large the factory was. It's possible that only a small percentage of the population was employed there, or that they found other jobs.
3. The answer is E. The fact that the number of children per household dropped slightly nationwide from 1970 to 1980 is irrelevant. Statistics showing a drop nationwide doesn't mean that there was a drop in the number of children per household in Mr. Bryant's hometown. This is a tricky question, as choice B, supporting the conclusion but not proving it, may seem reasonable. If the number of children per household declined nationwide, then it may not seem unreasonable to feel that this would support Mr. Bryant's decision not to expand his business. However, we're preparing you for promotional exams, not "real life." One of the difficult things about taking exams is that sometimes you're forced to make a choice between two statements that both seem like they could be the possible answer. What you need to do in that case is choose the best choice. Becoming annoyed or frustrated with the question won't really help much. If there's a review of the exam, you can certainly appeal the question. There have been many cases where, after an appeal, two possible choices have been allowed as correct answers. We've included this question, however, to help you see what to do should you get a question like this. It's most important not to get rattled, and to select the best choice. In this case, the connection between the statistical information and Mr. Bryant's decision is pretty remote. If the question had said that the number of children in Mr. Bryant's town had decreased, then choice B would have been a more reasonable choice. It could also help in this situation to visualize the situation. Picture Mr. Bryant in his armchair reading that, nationwide, the average number of children per household has declined slightly. How likely would this be to influence his decision, especially since he sells men's and women's clothing? It would take a while for this decline in population to show up, and we're not even sure if it applies to Mr. Bryant's hometown. Don't feel badly if you missed this, it was tricky. The more of these you do, the more comfortable you'll feel.

4. The answer is B. If a new clothing boutique specializing in casual women's clothing were to open soon, this would lend support to Mr. Bryant's decision not to expand, but would not prove that he had actually made the decision not to expand. A new women's clothing boutique would most likely be in competition with his existing business, thus making any possible expansion a riskier venture. We can't be sure from this, however, that he didn't go ahead and expand his business despite the increased competition. Choice A, proves the conclusion, would only be the answer if we could be absolutely sure from the statement that Mr. Bryant had actually not expanded his business.

5. The answer is C. This statement disproves the conclusion. In order for his sister to buy several items for her baby at Mr. Bryant's store, he would have to have changed his business to include children's clothing.

6. The answer is B. If Mr. Bryant's town is eligible for federal funds to encourage the location of new businesses in the central district, this would tend to support his decision not to expand his business. Funds to encourage new business would increase the likelihood of there being additional competition for Mr. Bryant's store to contend with. Since we can't say for sure that there would be direct competition from a new business, however, choice A would be incorrect. Note that this is also a tricky question. You might have thought that the new funds weakened the conclusion because it would mean that Mr. Bryant could easily get the money he needed. Mr. Bryant is expanding his present business, not creating a new business. Therefore he is not eligible for the funding.

7. The answer is A. It definitely proves the conclusion. The passage states that Mr. Bryant's store had been in business since 1885. A pie baked in honor of his store's 100th anniversary would have to be presented sometime in 1985. The conclusion states that he made his decision not to expand on November 7, 1983. If, more than a year later Mrs. MacIntyre comments that his store has maintained the same look and feel over the years, it could not have been expanded, or otherwise significantly changed.

8. The answer is D. If Mr. Bryant's aunt lent him \$50,000 in October, this would tend to weaken the conclusion, which took place in November. Because it was stated that Mr. Bryant would need to borrow money in order to expand his business, it would be logical to assume that if he borrowed money he had decided to expand his business, weakening the conclusion. The reason C, disproves the conclusion, is not the correct answer is because we can't be sure Mr. Bryant didn't borrow the money for another reason.

9. The answer is B. This is a very tricky question. It's stated that 59% of car occupants don't use seat belts. The legislature is considering the use of air bags because of safety issues. The advantage of air bags over seat belts is that they inflate upon impact, and don't require car occupants to do anything with them ahead of time. Since the population has strongly resisted using seat belts, the air bags could become even more important in saving lives. Since saving lives is the purpose of the proposed legislation, the information that a small percentage of people use seat belts could be helpful to the passage of the legislation. We can't be sure that this is reason enough for the legislature to vote for the legislation, however, so choice A is incorrect.

10. The answer is B, as the information that 5,900 lives could be saved would tend to support the conclusion. Saving that many lives through the use of air bags could be a very persuasive reason to vote for the legislation. Since we don't know for sure that it's enough of a compelling reason for the legislature to vote for the legislation, however, choice A could not be the answer.

11. The answer is C, disproves the conclusion. If the legislation had been passed as stated in the conclusion, there would be no reason to appoint someone head of an advisory committee six days later to analyze the "feasibility of the proposed legislation." The key word here is "proposed." If it has been proposed, it means it hasn't been passed. This contradicts the conclusion and therefore disproves it.

12. The answer is C, disproves the conclusion. If the legislation had passed, there would be no reason for supporters of the legislation to accuse the legislature of rejecting the legislation for political reasons. This question may have seemed so obvious that you might have thought there was a trick to it. Exams usually have a few obvious questions, which will trip you up if you begin reading too much into them.

13. The answer is D, as this would tend to disprove the conclusion. A projected dramatic rise in imported cars could be very harmful to the country's economy and could be a very good reason for some legislators to vote against the proposed legislation. It would be assuming too much to choose C, however, because we don't know if they actually did vote against it.

14. The answer is B. This information would tend to support the passage of the legislation. The estimate of the cost of the air bags is \$800 less than the cost estimated by opponents, and it's stated that the protection would be more reliable than any other type of seat belt. Both of these would be good arguments in favor of passing the legislation. Since we don't know for sure, however, how persuasive they actually were, choice A would not be the correct choice.

15. The answer is E, as this is irrelevant information. It really doesn't matter whether auto sales in 1981 have increased slightly over the previous year. If the air bag legislation were to go into effect in 1984, that might make the information somehow more relevant. But the air bag legislation would not take effect until 1989, so the information is irrelevant, since it tells us nothing about the state of the auto industry then.

16. The answer is B, supports the conclusion. This is a tricky question. While at first it might seem to prove the conclusion, we can't be sure that the air bag legislation is responsible for the drop in automobile deaths. It's possible air bags came into popular use without the legislation, or with different legislation. There's no way we can be sure that it was the proposed legislation mandating the use of air bags that was responsible.

17. The answer is A. If, in June of 1984, the lobbyist received a bonus "for her work on the air bag legislation," we can be sure that the legislation passed. This proves the conclusion.

18. The answer is B. This is another tricky question. A three fold stock increase would strongly suggest that the legislation had been passed, but it's possible that factors other than the air bag legislation caused the increase. Note that the stock is in "crash protection equipment." Nowhere in the statement does it say air bags. Seat belts, motorcycle helmets, and collapsible bumpers are all crash protection equipment and could have contributed to the increase. This is just another reminder to read carefully because the questions are often designed to mislead you.

19. The answer is D. This would tend to weaken the conclusion because Marsha is very fond of her mother and she would not want to upset her unnecessarily. It does not prove it, however, because if Marsha strongly feels she is right, she probably wouldn't let her mother's opinion sway her. Choice E would also not be correct, because we cannot assume that Marsha's mother's opinion is of so little importance to her as to be considered irrelevant.

20. The answer is E. The statement is irrelevant. We are told that Marsha's income has doubled but we are not told why. The phrase "six months after the interview" can be misleading in that it leads us to assume that the increase and the interview are related. Her income could have doubled because she regained her popularity but it could also have come from stocks or some other business venture. Because we are not given any reason for her income doubling, it would be impossible to say whether or not this statement proves or disproves the conclusion. Choice E is the best choice of the five possible choices. One of the problems with promotional exams is that sometimes you need to select a choice you're not crazy about. In this case, "not having enough information to make a determination" would be the best choice. However, that's not an option, so you're forced to work with what you've got. On these exams it's sometimes like voting for President, you have to pick the "lesser of the two evils" or the least awful choice. In this case, the information is more irrelevant to the conclusion than it is anything else.

21. The answer is D, weakens the conclusion. We've been told that Marsha's agent feels that she should apologize. If he is pleased with her interview, then it would tend to weaken the conclusion but not disprove it. We can't be sure that he hasn't had a change of heart, or that there weren't other parts of the interview he liked so much that they outweighed her unwillingness to apologize.

22. The answer is A. The conclusion states that Marsha will donate \$1 to the Cellulite Prevention League for every pound the actress loses. Marsha's sister's financial report on the League's activities directly supports and proves the conclusion.

23. The answer is C, disproves the conclusion. If the magazine receives many letters commending Marsha for her courage in apologizing, this directly contradicts the conclusion, which states that Marsha didn't apologize.

24. The answer is B. It was stated in the passage that two of Marsha's performances were cancelled after the controversy first occurred. The cancellation of another performance immediately after her interview was published would tend to support the conclusion that she refused to apologize. Because we can't be sure, however, that her performance wasn't cancelled for another reason, choice A would be incorrect.

25. The answer is E, as this information is irrelevant. Postponing the article an extra week does not affect Marsha's decision or the public's reaction to it.
26. The answer is C. If 500 new employees are hired to handle the "increased paperwork created by the new tax on videocassettes", this would directly contradict the conclusion₁ which states that the legislature defeated both bills. (They should all be this easy.)
27. The answer is B. The results of the study would support the conclusion. If implementing the legislation was going to be so costly, it is likely that the legislature would vote against it. Choice A is not the answer, however, because we can't be sure that the legislature didn't pass it anyway.
28. The answer is E. It's irrelevant to the conclusion that 80% of all those working in the entertainment industry own videocassette recorders. Sometimes if you're not sure about these, it can help a lot to try and visualize the situation. Why would someone voting on this legislation care about this fact? It doesn't seem to be the kind of information that would make any difference or impact upon the conclusion.
29. The answer is B. The head of the law enforcement agency's statement that the legislation would be unenforceable would support the conclusion. It's possible that many legislators would question why they should bother to pass legislation that would be impossible to enforce. Choice A would be incorrect however, because we can't be sure that the legislation wasn't passed in spite of his statement.
30. The answer is D. This would tend to weaken the conclusion because the prospect of several large companies going bankrupt would seem to be a good argument in favor of the legislation. The possible loss of jobs and businesses would be a good reason for some people to vote for the legislation. We can't be sure, however, that this would be a compelling enough reason to ensure passage of the legislation so choice C is incorrect.

This concludes our section on the "Validity of Conclusion" type of questions.

We hope these weren't too horrible for you. It's important to keep in mind exactly what you've been given and exactly what they want you to do with it. It's also necessary to remember that you may have to choose between two possible answers. In that case you must choose the one that seems the best. Sometimes you may think there is no good answer. You will probably be right but you can't let that upset you. Just choose the one you dislike the least.

We want to repeat that it is unlikely that this exact format will appear on the exam. The skills required to answer these questions, however, are the same as those you'll need for the exam so we suggest that you review this section before taking the actual exam.

31. The answer is C. This next set of questions requires you to "switch gears" slightly, and get used to different formats. In this type of question, you have to decide whether the conclusion is proved by the facts given, disproved by the facts given, or neither because not enough information has been provided. Fortunately, unlike the previous questions, you don't have to decide whether particular facts support or don't support the conclusion. This type of question is more straight forward, but the reasoning behind it is the same. We are told that the Bills have won two games less than the Patriots, and that the Patriots are in first place and the Bills are in second place. We are also told that there are two games left to play, and that they won't play each other again. The conclusion states that the Bills won the division. Is there anything in the four statements that would prove this? We have no idea what the outcome of the last two games of the season was. The Bills and Patriots could have ended up tied at the end of the season, or the Bills could have lost both or one of their last games while the Patriots did the same. There might even be another team tied for first or second place with the Bills or Patriots. Since we don't know for sure, Choice A is incorrect. Choice B is trickier. It might seem at first glance that the best the Bills could do would be to tie the Patriots if the Patriots lost their last two games and the Bills won their last two games. But it would be too much to assume that there is no procedure for a tie-breaker that wouldn't give the Bills the division championship. Since we don't know what the rules are in the event of a tie (for example, what if a tie was decided on the results of what happened when the two teams had played each other, or on the best record in the division, or on most points scored?), we can't say for sure that it would be impossible for the Bills to win their division. For this reason, choice C is the answer, as we don't have enough information to prove or disprove the conclusion. This question looked more difficult than it actually was. It's important to disregard any factors outside of the actual question, and to focus only on what you've been given. In this case, as on all of these types of questions, what you know or don't know about a subject is actually irrelevant. It's best to concentrate only on the actual facts given.

32. The answer is A. The conclusion is proved by the facts given.

In this type of problem it is usually best to pull as many facts as possible from the sentences and then put them into a simpler form. The phrasing and the order of exam questions are designed to be confusing so you need to restate things as clearly as possible by eliminating the extras.

Sentence 1 tells us that there are only two possible colors for eyes and two for hair. Looking at the other sentences we learn that eyes are either green or gold and that hair is either silver or purple. If half the beings with purple hair have golden eyes then the other half must have green eyes since it is the only other eye color. Likewise, if one-third of those with silver hair have green eyes the other two-thirds must have golden eyes.

This information makes it clear that there are more golden-eyed beings on Zeinon than green-eyed ones. It doesn't matter that we don't know exactly how many are actually living on

the planet. The number of those with gold eyes ($\frac{1}{2}$ plus $\frac{2}{3}$) will always be greater than the number of those with green eyes ($\frac{1}{2}$ plus $\frac{1}{3}$), no matter what the actual figures might be. Sentence 3 is totally irrelevant because even if there were more silver-haired inhabitants it would not affect the conclusion.

33. The answer is C. The conclusion is neither proved nor disproved by the facts because we don't know how many miles Bethany is from Amaranth.

With this type of question, if you're not sure how to approach it you can always substitute in a range of "real numbers" to see what the result would be. If they were 200 miles apart Joe's Truck Rental would be cheaper because they would charge a total of \$160 while National Movers would charge \$175.

$$\begin{aligned} \text{Joe's} & - \$100 \text{ plus } .30 \times 200 \text{ (or } \$60) = \$160 \\ \text{National} & - \$150 \text{ plus } .25 \times 100 \text{ (or } \$25) = \$175 \end{aligned}$$

If the towns were 600 miles apart, however, National Movers would be cheaper. The cost of renting from National would be \$275 compared to the \$280 charged by Joe's Trucking.

$$\begin{aligned} \text{Joe's} & - \$100 \text{ plus } .30 \times 600 \text{ (or } \$180) = \$280 \\ \text{National} & - \$150 \text{ plus } .25 \times 500 \text{ (or } \$125) = \$275 \end{aligned}$$

34. The answer is B. We've varied the format once more, but the reasoning is similar. This is a tedious question that is more like a math question, but we wanted to give you some practice with this type, just in case. You won't be able to do this question if you've forgotten how to do percents. Many exams require this knowledge, so if you feel you need a review we suggest you read Booklets 1, 2 or 3 in this series.

The only way to attack this problem is to go through each choice until you find the one that is correct. Choice A states that Plainfield, Smallville and Granton are cities. Let's begin with Plainfield. The passage states that in 1960 Plainfield had a population of 12,000, and that it grew 10% between 1960 and 1970, and another 20% between 1970 and 1980. Ten percent of 12,000 is 1200 ($12,000 \times .10 = 1200$). Therefore, the population grew from 12,000 in 1960 to $12,000 + 1200$ between 1960 and 1970. At the time of the 1970 Census, Plainfield's population was 13,200. It then grew another 20% between 1970 and 1980, so, $13,200 \times .20 = 2640$. 13,200 plus the additional increase of 2640 would make the population of Plainfield 15,840. This would qualify it as a city, since its population is over 15,000. Since a change upward in the population of a municipality is re-classified immediately, Plainfield would have become a city right away. So far, statement A is true. The passage states that Smallville's population has not changed significantly in the last twenty years. Since Smallville's population was 20,283, Smallville would still be a city. Granton had a population of 25,000 (what a coincidence that so many of these places have such nice, even numbers) in 1950. The population has decreased 25% in each ten year period since that time. So from 1950 to 1960 the population decreased 25%. $25,000 \times .25 = 6,250$. $25,000 \text{ minus } 6,250 = 18,750$. So the population of Granton in 1960 would have been 18,750. (Or you could have saved a step and multiplied 25,000 by .75 to get 18,750.) The population from 1960 to 1970 decreased an additional 25%. So: $18,750 \times .25 = 4687.50$.

18,750 minus 4687.50 = 14,062.50. Or: $18,750 \times .75 = 14,062.50$. (Don't let the fact that a half of a person is involved confuse you, these are exam questions, not real life.) From 1970 to 1980 the population decreased an additional 25%. This would mean that Granton's population was below 15,000 for more than ten years, so its status as a city would have changed to that of a town, which would make choice A incorrect, since it states that Granton is a city.

Choice B states that Smallville is a city and Granton is a town which we know to be true from the information above. Choice B is correct so far. We next need to determine if Ellenville is a village. Ellenville had a population of 4,283 in 1950, and increased 5% in each ten year period since 1950. $4,283 \times .05 = 214.15$. $4,283$ plus $214.15 = 4,497.15$, so Ellenville's population from 1950 to 1960 increased to 4,497.15. (Or: $4,283 \times 1.05 = 4,497.15$.) From 1960 to 1970 Ellenville's population increased another 5%: $4,497.15 \times .05 = 224.86$. $4,497.15$ plus $224.86 = 4,722.01$ (or: $4,497.15 \times 1.05 = 4,722.01$.) From 1970 to 1980, Ellenville's population increased another 5%: $4,722.01 \times .05 = 236.1$. $4,722.01$ plus $236.10 = 4,958.11$. (Or: $4,722.01 \times 1.05 = 4,958.11$.)

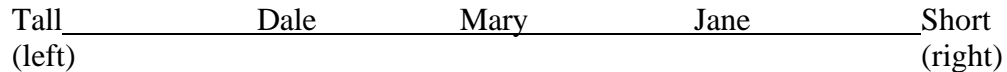
Ellenville's population is still under 5,000 in 1980 so it would continue to be classified as a village. Since all three statements in choice B are true, Choice B must be the answer. However, we'll go through the other choices. Choice C states that Springdale is a town. The passage tells us that the population of Springdale doubled from 1960 to 1970, and increased 25% from 1970 to 1980. It doesn't give us any actual population figures, however, so it's impossible to know what the population of Springdale is, making Choice C incorrect. Choice C also states that Granton is a town, which is true, and that Ellenville is a town, which is false (from Choice B we know it's a village). Choice D states that Plainfield and Smallville are cities, which is information we already know is true, and that Ellenville is a town. Since Ellenville is a village, Choice D is also incorrect.

This was a lot of work for just one question and we doubt you'll get one like this on this section of the exam, but we included it just in case. On an exam, you can always put a check mark next to a question like this and come back to it later, if you feel you're pressed for time and could spend your time more productively on other, less time consuming problems.

35. The answer is B. This question requires very careful reading. It's best to break the conclusion down into smaller parts in order to solve the problem. The first half of the conclusion states that the average person in the 20-29 age group (Group A) drinks less tea daily than the average person in the 40-50 age group (Group C). The average person in Group A drinks 2.1 cups of tea daily, while the average person in Group C drinks 2.6 cups of tea daily. Since 2.1 is less than 2.6, the conclusion is correct so far. The second half of the conclusion states that the average person in Group A drinks more coffee daily than the average person in the 30-39 age group (Group B) drinks cola. The average person in Group A drinks 1.8 cups of coffee daily while the average person in Group B drinks 1.9 glasses of cola. This disproves the conclusion, which states that the average person in Group A drinks more coffee daily than the average person in Group B drinks cola.

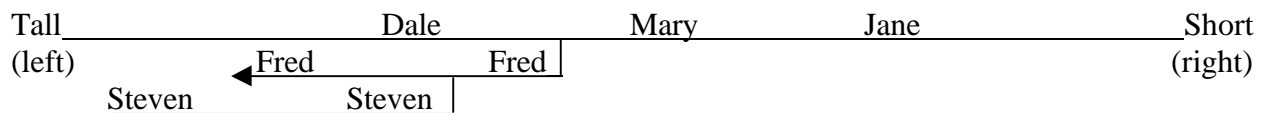
36. The answer is C. The easiest way to approach a problem that deals with the relationship between a number of different people or things is to set up a diagram. This type of problem is usually too confusing to do in your head. For this particular problem the "diagram" could be a line, one end of which would be labelled tall and the other end labelled short. Then, taking one sentence at a time, place the people on the line to see where they fall in relation to one another.

The diagram of the first sentence would look like this:

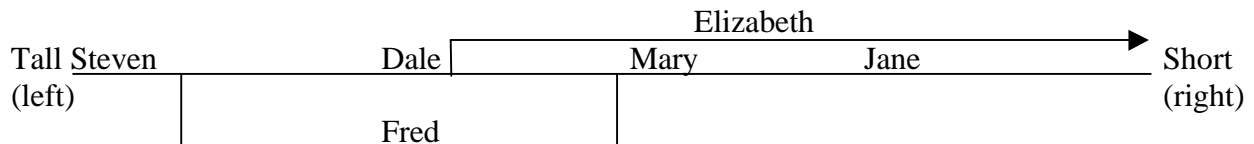


Mary is taller than Jane but shorter than Dale so she would fall somewhere between the two of them. We have placed tall on the left and labelled it left just to make the explanation easier. You could just as easily have reversed the position.

The second sentence places Fred somewhere to the left of Mary because he is taller than she is. Steven would be to the left of Fred for the same reason. At this point we don't know whether Steven and Fred are taller or shorter than Dale. The new diagram would look like this:

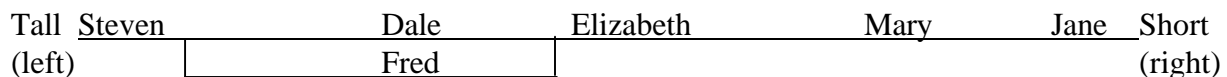


The third sentence introduces Elizabeth, presenting a new problem. Elizabeth can be anywhere to the right of Dale. Don't make the mistake of assuming she falls between Dale and Mary. At this point we don't know where she fits in relation to Mary, Jane, or even Fred. We do get information about Steven, however. He is taller than Dale so he would be to the left of Dale. Since he is also taller than Fred (see sentence two) we know that Steven is the tallest person thus far. The diagram would now look like this:



Fred's height is somewhere between Steven and Mary, Elizabeth's anywhere between Dale and the end of the line.

The fourth sentence tells us where Elizabeth stands, in relation to Fred and the others in the problem. The fact that she is taller than Mary means she is also taller than Jane. The final diagram would look like this:



We still don't know whether Dale or Fred is taller, however. Therefore, the conclusion that Dale is taller than Fred can't be proved. It also can't be disproved because we don't know for sure that he isn't. The answer has to be Choice C, as the conclusion can't be proved or disproved.

37. The answer is A. This is another problem that is easiest for most people if they make a diagram. Sentence 1 states that Main Street is between Spring Street and Glenn Blvd. At this point we don't know if they are next to each other or if they are separated by a number of streets. Therefore, you should leave space between streets as you plot your first diagram.

The order of the streets could go either:

Spring St.	or	Glenn Blvd.
Main St.		Main St.
Glenn Blvd.		Spring St.

Sentence 2 states that Hawley Street is one block south of Spring Street and 3 blocks north of Main Street. Because most people think in terms of north as above and south as below and because it was stated that Hawley is one block south of Spring Street and three blocks north of Main Street, the next diagram could look like this:

Spring
Hawley

Main
Glenn

The third sentence states that Glenn Street is five blocks south of Elm and four blocks south of Main. It could look like this:

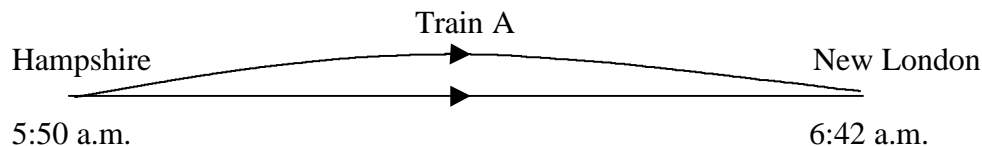
Spring
Hawley

Elm
Main

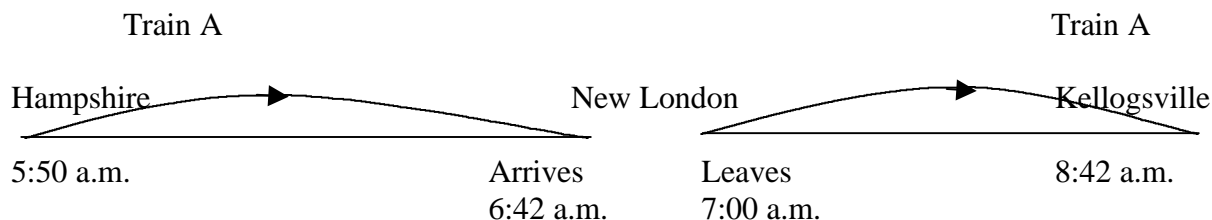
Glenn

The conclusion states that Elm Street is between Hawley Avenue and Glenn Blvd. From the above diagram we can see that this is the case.

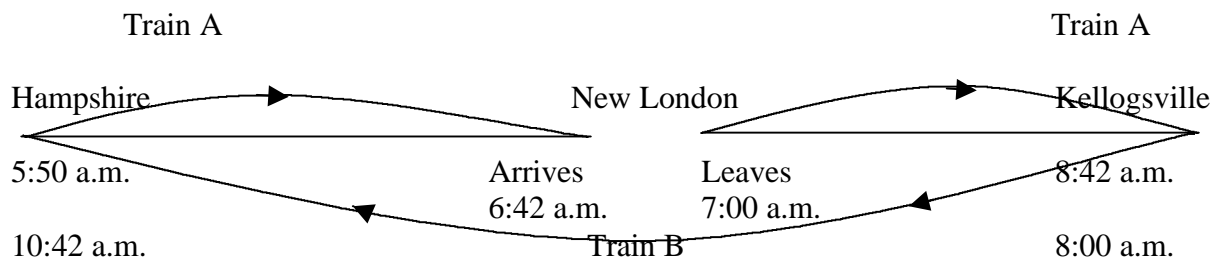
38. The answer is B. For most people the best way to do this problem is to draw a diagram, plotting the course of both trains. Sentence 1 states that train A leaves Hampshire at 5:50 a.m. and reaches New London at 6:42. Your first diagram might look like this:



Sentence 2 states that the train leaves New London at 7:00 a.m. and arrives in Kellogsville at 8:42 a.m. The diagram might now look like this:



Sentence 3 gives us the rest of the information that must be included in the diagram. It introduces Train B, which moves in the opposite direction, leaving Kellogsville at 8:00 a.m. and arriving at Hampshire at 10:42 a.m. The final diagram might look like this:



As you can see from the diagram, the routes of the two trains will overlap somewhere between Kellogsville and New London. If you read sentence 4 quickly and assumed that that was the section with only one track, you probably would have assumed that there would have had to be a collision. Sentence 4 states, however, that there is only one railroad track between New London and Hampshire. That is the only section, then, where the two trains could collide. By the time Train B gets to that section, however, Train A will have passed it. The two trains will pass each other somewhere between New London and Kellogsville, not New London and Hampshire.

ANSWER KEY

1. D
2. B
3. E
4. B
5. C
6. A
7. D
8. B
9. B
10. B
11. C
12. C
13. D
14. B
15. E
16. B
17. A
18. B
19. D
20. E

21. D
22. A
23. C
24. B
25. E
26. C
27. B
28. E
29. B
30. D
31. C
32. A
33. C
34. B
35. B
36. C
37. A
38. B