

Full Test

Critical Thinking Test 1



Solutions Booklet

Instructions

This practice critical thinking test comprises the following **five** sections:

1. Analysing Arguments
2. Assumptions
3. Deductions
4. Inferences
5. Interpreting Information

Read the instructions preceding each section and answer the questions. There are a total of **40 questions** in this test and you should aim to correctly answer as many questions as you can within **40 minutes**.

Try to find a time and place where you will not be interrupted during the test. When you are ready, turn to the next page and begin.

Section 1: Analysing Arguments

Instructions

When making important decisions, it is useful to be able to distinguish between a strong argument and a weak argument. A strong argument is both important and directly related to the question. A weak argument is not directly related to the question, or is of minor importance, or may be related to a trivial aspect of the question or confuses correlation with causation (incorrectly assuming that because two things are related, they cause each other to happen).

In this series of questions, each question is followed by a series of arguments. You must regard each argument as true, regardless whether it is weak or strong.

If you consider an argument to be strong, select **Strong Argument**, or if you consider an argument to be weak, select **Weak Argument**. Judge each question and argument individually. Try not to take into account individual opinion or general knowledge since each argument is considered to be true.

Try to find a time and place where you will not be interrupted during the test. When you are ready, turn to the next page and begin.

Statement One:

Is the law requiring all large shops in England to charge 5p for single-use plastic bags beneficial for the environment?

Q1 Yes; the scheme encourages people to re-use plastic bags and thereby reduce the litter associated with them.

Strong Argument

Weak Argument

Answer: Strong Argument

Explanation: If the scheme encourages people to re-use plastic bags, then less are being bought or only used once, which could decrease the number of plastic bags we're currently using, and, as stated in the argument, would be helpful for the environment as a reduction in litter is a positive to consider. This argument is a strong one as it directly addresses the statement.

Q2 Yes; the current economy means that most consumers have more money to spend on grocery shopping.

Strong Argument

Weak Argument

Answer: Weak Argument

Explanation: This argument is a weak one. Despite the argument about the cost factor for consumers, which may be quite important for the shoppers involved, it does not address the main issue, which is the impact of this law on the environment, and not people's finances. The argument is misleading.

Statement One:

Is the law requiring all large shops in England to charge 5p for single-use plastic bags beneficial for the environment?

Q3 No; charging does not affect the fact that plastic bags are still non-biodegradable. Large shops should minimise their availability in favour of greener alternatives.

Strong Argument

Weak Argument

Answer: Strong Argument

Explanation: Making single-use plastic bags more expensive will not affect the fact that they remain non-biodegradable. Given this fact, a reduction in the number of plastic bags is still a benefit, but not as much as previously thought. This argument also suggests an improvement which could be made upon the current law. It is a strong argument because it is related to the statement, even if it is arguing against it.

Statement Two:

Would it be beneficial to UK public health to introduce a tax on sugar?

Q4 No; sugar is a vital ingredient in many cake and baking recipes.

Strong Argument

Weak Argument

Answer: Weak Argument

Explanation: This is true, but the proposed argument doesn't relate this fact to whether or not it would affect people's health. As such, this is a weak argument because it doesn't offer a concrete argument countering the statement.

Q5 Yes; it has been proposed that the money generated can be used to combat childhood obesity, and fund primary school sport.

Strong Argument

Weak Argument

Answer: Strong Argument

Explanation: The argument presents health benefits (encouraging sport and weight loss for young children) that the money raised from the taxation of sugar would bring about. The argument is a strong because it is related to the statement and uses two examples to emphasise its case.

Statement Two:

Would it be beneficial to UK public health to introduce a tax on sugar?

Q6 No; consumption taxes would hit those living below the poverty line the hardest, as they typically eat very sugary foods.

Strong Argument

Weak Argument

Answer: Weak Argument

Explanation: The argument presented is strongly emotive, but only relates the statement to a person's finances, not a person's health, nor the general public's either. Because this argument doesn't directly address the statement, it is a weak argument.

Statement Three:

Is the expansion of short-haul budget air travel a good thing?

Q7 No; motion-sickness is often associated with travelling on aeroplanes.

Strong Argument

Weak Argument

Answer: Weak Argument

Explanation: The flaw in this argument is that it does not relate to the initial statement. It doesn't elaborate on this by, for example mentioning any increases in people experiencing discomfort or travel sickness as a result of the expansion of short-haul budget air travel. Therefore, it is a weak argument.

Q8 No; budget flights come with a large carbon footprint – they may become increasingly more chosen instead of less carbon-intensive alternatives.

Strong Argument

Weak Argument

Answer: Strong Argument

Explanation: This is a strong argument because it argues that the environmental drawbacks (large carbon footprint) would increase as a direct result of budget air travel, and that this factor reduces people's decision to take other forms of transport which are less detrimental to the environment.

Section 2: Assumptions

Instructions

This section will assess your ability to reason logically when analysing arguments.

An assumption is something which is presumed or taken for granted. When a person says “I will see you tomorrow”, it is taken for granted that they will be around tomorrow, and that they will not have last-minute plans which prevent them from seeing you tomorrow.

In this section, you will be provided with a number of statements. Each statement will be followed by a series of proposed assumptions. You must decide whether the proposed assumption has been made in the original statement.

If you think that the assumption is taken for granted in the statement, select

Assumption Made.

If you think that the assumption is not taken for granted in the statement, select

Assumption Not Made.

Remember to judge each question individually and base your responses on the statements provided.

Try to find a time and place where you will not be interrupted during the test. When you are ready, turn to the next page and begin.

Statement Four:

A franchise usually grows at a much faster rate than a business that is not a franchise. A franchise licenses its trade name and its operating methods to a person or group for a percentage cut of profits earned.

Q9 A franchise is often less profitable than a non-franchise.

Assumption Made
Assumption Not Made

Answer: Assumption Not Made

Explanation: The statement says that a franchise usually grows faster than a non-franchise business. But we are not aware of whether it is or is not less profitable than a non-franchise. So assumption not made.

Q10 Franchise arrangements can be mutually beneficial to both the main business and the person or group operating it.

Assumption Made
Assumption Not Made

Answer: Assumption Made

Explanation: The benefits we can draw from the statement for running a franchise are that the franchise received a share of the franchisee's profits. The franchisee benefits from being able to use the franchise's trade name, and the licence to conduct business in the same way as the franchise. The franchisee is also more likely to grow at a faster rate than if they hadn't set up as a franchisee. Both parties benefit, so it is a safe assumption that a franchise arrangement is mutually beneficial.

Statement Four:

A franchise usually grows at a much faster rate than a business that is not a franchise. A franchise licenses its trade name and its operating methods to a person or group for a percentage cut of profits earned.

Q11 A trade name is valued.

Assumption Made
Assumption Not Made

Answer: Assumption Made

Explanation: An assumption can easily be made that a trade name is valued. The value of the trade name is equivalent to a percentage of the profits, which a franchisee believes is worth paying.

Statement Five:

The football team requires a better game plan than the one they already have if they want a better chance at winning against their superior archrival.

Q12 The team's archrival have a better game plan than they do.

Assumption Made
Assumption Not Made

Answer: Assumption Not Made

Explanation: The rivals are said to be superior, but this might be due to other factors, and not just better game plans. We can't make any assumptions on the quality or strength of either team's game plans as we have no information in the statement to base this on.

Q13 The team don't currently have a good chance at winning against their archrival.

Assumption Made
Assumption Not Made

Answer: Assumption Made

Explanation: The second sentence of the statement suggests that a change must occur for the team to improve their chances of winning, but we're not told whether their odds of winning are already good nor bad. The rivals are described as 'superior', hence we're automatically convinced to believe that an inferior team have poorer chances of beating their rivals than the rivals have of beating them.

Statement Five:

The football team requires a better game plan than the one they already have if they want a better chance at winning against their superior archrival.

Q14 The team cannot win with the current game plan they have.

Assumption Made
Assumption Not Made

Answer: Assumption Not Made

Explanation: The team would have a better chance of winning with a better game plan, but nothing in the statement can lead us to assume that they have zero chance of winning with their current game plan.

Statement Six:

My friend should have less sugary drinks in his diet to better protect his teeth.

Q15 The friend has too many sugary drinks in his diet.

Assumption Made
Assumption Not Made

Answer: Assumption Made

Explanation: He should have less because it is thought to protect his teeth. We're told what the friend should do to better protect their teeth. By stating that they should have less sugary drinks, we can assume that reducing drinks is necessary and that they have too many.

Q16 Consuming too much sugar can be bad for your teeth.

Assumption Made
Assumption Not Made

Answer: Assumption Made

Explanation: If sugary drinks damage teeth, then we can assume that it is the sugar in the drinks that does this, otherwise the passage wouldn't have stated 'sugary drinks,' but 'drinks' in general. Also, we will assume that the everyone else's teeth are susceptible to damage from sugar, just like this person's friend as nothing is said about them being a special case.

Section 3: Deductions

Instructions

This section will assess your ability to reason logically when analysing arguments.

In this section, a statement will be provided followed by a series of suggested conclusions. Here, you must take the statement to be true. After reading each conclusion underneath the statement, you must decide whether you think it follows from the statement provided.

If you agree that the conclusion exactly follows the statement, choose **Conclusion Follows**.

However, if you do not agree that the conclusion exactly follows then choose **Conclusion Does Not Follow**.

You must select your answer based only on the information presented; not using general knowledge. Similarly, you are advised not to let your own opinions or prejudices influence your decisions; stick to the statements and base your judgements on the facts presented.

Statement Seven:

Every website correlates to a set of numbers known as a unique IP address. This set of numbers is read by DNS, which translates them into the web page we see on our screens. Without DNS we would have to type the numbers of the IP address into our browsers.

Q17 IP addresses can be used for more than one website.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: If we were to look up that website by typing its IP address into our browsers, how would the browser know which site we wish to view? From the word 'unique' here, we can deduce that each website will have its own IP address, hence that two websites cannot share an IP address, therefore it can only be used for one website.

Q18 Each IP address has its own DNS.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: We're told that the DNS reads the sequence of numbers known as an IP address, but unlike with websites we can't deduce how many DNS's there are per IP address. The conclusion does not logically follow the information in the statement. Each one may very well be read by a different DNS, but we aren't presented with enough information to deduce that this is the case.

Statement Seven:

Every website correlates to a set of numbers known as a unique IP address. This set of numbers is read by DNS, which translates them into the web page we see on our screens. Without DNS we would have to type the numbers of the IP address into our browsers.

Q19 DNS is vital to the way we look up websites.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: “Without DNS, to view websites we would have to type IP addresses into our browsers.” The statement emphasises the importance of DNS and what would have to change for us to view websites if it did not exist. This seems fairly vital to preserving our current methods.

Statement Eight:

Some people's private data is stored online. Others prefer to keep their private data separate from the web. There are some people who are unaware their private data is stored online.

Q20 Most people would prefer to keep their data private but are unaware that it is online.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: Though we have two categories of people here; those whose data is stored online and those whose data is not. We cannot know whether most people who wish to keep their data private fall into the category of not knowing that their data is stored online or not. It cannot be deduced that some people cross-over from either category.

Q21 Some people's private data is not stored online.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: Similar to the previous explanation, we can imagine the different categories of people described in the above statement and arrive at the conclusion that some people do not have their private data stored online in that some others do.

Statement Eight:

Some people's private data is stored online. Others prefer to keep their private data separate from the web. There are some people who are unaware their private data is stored online.

Q22 Everyone has their private data stored online.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: The statement says only that some people keep their private data online. Therefore, we cannot conclude that everyone has their private data stored online.

Statement Nine:

Websites that do not load within three seconds lose out on potential customers.
A half second difference in page load times can make a 10% difference in sales, yet retail websites have actually been getting slower.

Q23 People do not buy as much from slower websites than faster ones.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: The statement says that a 3 second loading time loses out on potential customers, evidence for this is reinforced by the statement 'a half second... makes a 10% difference in sales...'

The conclusion is a logical deduction from the information given in the statement.

Q24 A fast website is good for business.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: Similar to the previous question, we are looking at the reverse conclusion. If slow websites are bad for business, then a fast website must be good for business. The anecdote relating half-second differences to page loading times provides evidence for either case.

Section 4: Inferences

Instructions

This section will assess your ability to reason logically when analysing arguments.

An inference is a conclusion drawn from observed or supposed facts. For example, if someone presses a light switch but the light does not turn on, they might infer that the filament has burnt out. However, inferences may or may not be correct. For example, in this case, the bulb could be missing, or a fuse could be blown.

The questions in this section of the test will begin with a statement of facts that must be regarded as true. After each statement, you will be presented with possible inferences which might be drawn from facts in the statement. Analyse each inference separately and decide on its degree of truth.

For each inference, you will be provided with 5 possible answers:

True, if you believe the inference is definitely true, i.e. it correctly follows beyond a reasonable doubt.

Probably True if, based on the facts at hand, you think the inference is probably true; that it is more likely to be true than false, but not true beyond a reasonable doubt.

Insufficient Data, if you decide that there is not enough data to make a decision based on the provided facts (or lack of facts).

Probably False, if, based on the facts presented, you think the inference is probably false; i.e. it is more likely to be false than true, but there is not enough evidence to suggest that it is definitely false.

False, if you think the inference is definitely false; i.e. it must be incorrect because it misrepresents the facts provided or contradicts the facts provided in the statement.

Statement Ten:

Mark has to commute to and from the office every day, for five days a week. He has to travel in if he wants to work, because he cannot work from home. Mark's quickest journey takes about 75 minutes and costs him £4.50 each way. Mark's salary fluctuates each week depending on how much work he does, but it is usually within £40 of £320.

Q25 Mark is paid more when he works harder.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: Probably True

Explanation: It is clearly stated in the final sentence of the statement that the quantity of work is proportional to his pay. Other factors might also be taken into consideration, such as quality, as his salary fluctuates each week, but if this is the case it is not inferred in the passage. There may exist some instances in which he works more than the week before but is paid the same, or even less, as there isn't a mention of a strict paid by the hour agreement.

Q26 Mark could get to work within 15 minutes.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: False

Explanation: The third sentence in the statement explicitly states that his quickest journey takes 75 minutes. If his absolute quickest journey is 75 minutes, there is no way that Mark's journey to work could be any less than that.

Statement Ten:

Mark has to commute to and from the office every day, for five days a week. He has to travel in if he wants to work, because he cannot work from home. Mark's quickest journey takes about 75 minutes and costs him £4.50 each way. Mark's salary fluctuates each week depending on how much work he does, but it is usually within £40 of £320.

Q27 Mark's journeys always cost him at least £2.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: Insufficient Data

Explanation: There is nothing in the text to suggest the cost ever wavers from £4.50, but this is only for his quickest journey. There is a possibility that a longer journey costs less, possibly even less than £2. For example, an hour and a half's bus ride in London only costs £1.50.

Q28 Mark has previously been paid £560 in a week.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: Probably False

Explanation: The passage infers that he is paid depending on how much work he does, so the statement infers that this is possible, but if he is usually paid £40 within £320, then £560 is well out of this range and quite unlikely.

Statement Eleven:

Sally would spend five hours every day with a small group of friends, so they could study together in preparation for their upcoming exams in a month's time. Sally would have very little free time as she also wanted to study on her own. She achieved very high grades; even better than what she was expecting.

Q29 Sally studied with her friends on the weekend.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: True

Explanation: The statement indicates that she studied with her friends every day – there is nothing inferring that there were any exceptions to this.

Statement Eleven:

Sally would spend five hours every day with a small group of friends, so they could study together in preparation for their upcoming exams in a month's time. Sally would have very little free time as she also wanted to study on her own. She achieved very high grades; even better than what she was expecting.

Q30 The group of friends Sally studied with were all motivated to do well in the upcoming exams.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: Probably True

Explanation: Studying for five hours every day requires a high level of commitment. We cannot know exactly how motivated her friends were. The statement infers that the group of friends Sally studied with were the same people each day, so they would require the same level of commitment and motivation as Sally. The difference is in the motivating factors behind why the students studied together, which might not all be because they wanted to do well in the exams e.g. spend time with friends, avoid doing something else.... Hence, 'Probably True.'

Statement Eleven:

Sally would spend five hours every day with a small group of friends, so they could study together in preparation for their upcoming exams in a month's time. Sally would have very little free time as she also wanted to study on her own. She achieved very high grades; even better than what she was expecting.

Q31 Sally was expecting to get the best marks possible.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: False

Explanation: This must be false because the final sentence points out that Sally obtained better results than she was expecting. If she expected to get the absolute best marks, it would have been impossible to achieve results which were any better than the top marks.

Q32 Sally travelled around to different parts of the country to study in different places.

- True
- Probably True
- Insufficient Data
- Probably False
- False

Answer: Probably False

Explanation: This is unlikely seeing as Sally had a commitment to her friends every day, but we cannot rule it out as false, because this is still possible. We are not told where she met with her friends to study. It is plausible that she travelled around the country each day and studied in various locations, but this seems unlikely.

Section 5: Interpreting Information

Instructions

This section will assess your ability to reason logically when analysing arguments.

The following questions will consist of a passage of information, followed by a series of conclusions. You are instructed to assume all information in the passage is true. The task is to judge whether or not each of the proposed conclusions logically follows, beyond a reasonable doubt, from the information given in the paragraph.

If you think that a conclusion follows beyond a reasonable doubt (but perhaps not exactly, or necessarily, unlike in section 3), select **Conclusion follows**.

If you think the conclusion does not follow beyond a reasonable doubt based on the facts given, select **Conclusion does not follow**.

Do not use general knowledge when answering, only use the information provided in the passage. Remember to judge each conclusion individually.

Statement Twelve:

The Social Housing Regulator investigates complaints stemming from all parties involved in public housing. It responds to issues raised rather than providing a continuous oversight role. It can only intervene when it finds that a failure to meet consumer standards has caused or has potential to cause detriment to tenants.

Q33 The Social Housing Regulator can investigate an issue raised by a local council.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: The first sentence of the statement indicates that the Social Housing Regulator can investigate complaints from all parties involved in public housing, and a local council may just be one of those parties, but there is no reference to local council so we cannot conclude demonstrably as follows.

Q34 The Social Housing Regulator can intervene in any situation where consumer standards are not met.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: The Social Housing Regulator can intervene when standards are not met and when this could cause detriment to tenants, but, from the information in the statement, only if an issue is brought to the organisation. There may be cases which aren't reported to the SHR which it would not be able to intervene in.

Statement Twelve:

The Social Housing Regulator investigates complaints stemming from all parties involved in public housing. It responds to issues raised rather than providing a continuous oversight role. It can only intervene when it finds that a failure to meet consumer standards has caused or has potential to cause detriment to tenants.

Q35 The Social Housing Regulator is a reactive organisation.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: The statement says it responds to issues (rather than actively looking for breaches of standards).

Statement Thirteen:

The Mathematics Teacher Exchange is a highly innovative programme that aims to foster a radical shift in improving primary mathematics teaching in England. It aims to learn from the Shanghai mastery approach to teaching mathematics by sending and receiving delegations to and from the city. Subsequently, the English schools have made changes in practices.

Q36 The Mathematics Teacher Exchange is similar to other programmes.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: The first sentence of the statement explains that the programme is highly innovative and aims to foster a radical shift, the language used, particularly the phrase, 'radical shift,' and word 'innovative,' suggests it is different from what has gone before, so it would be incorrect to conclude that it is similar to other, previous programmes.

Q37 The Shanghai mastery system is seen as a better way to teach mathematics.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: The statement says schools in England aim to learn from that system and have subsequently made changes, this would be done because the system is seen as a way to improve mathematics in England.

Statement Thirteen:

The Mathematics Teacher Exchange is a highly innovative programme that aims to foster a radical shift in improving primary mathematics teaching in England. It aims to learn from the Shanghai mastery approach to teaching mathematics by sending and receiving delegations to and from the city. Subsequently, the English schools have made changes in practices.

Q38 Mathematics results in England have improved.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: There is no mention of results in the statement, only on what people are hoping the aims of the system are on the results.

Statement Fourteen:

Productivity growth in the UK is currently sluggish. Matching productivity in the US would make each family in the UK £21,000 better off. To boost productivity, the UK needs to pay due attention to improving the skills of the workforce and to putting them to better use. Productivity relies on a dynamic economy where good ideas spread rapidly, workers are well-matched to jobs, and firms are able to scale up.

Q39 Productivity growth in the UK lags most other nations.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Does Not Follow

Explanation: The only comparison in the statement is to the US, we have no idea of either of these countries' performance to other nations. Thus, we can't reach the above conclusion.

Q40 Productivity could be improved by giving extra training to the workforce.

Conclusion Follows
Conclusion Does Not Follow

Answer: Conclusion Follows

Explanation: The statement says that to boost productivity the skills of the workforce need improving, so extra training could help.

End of test