Watson Glaser Study Tips

Public Health Specialty Training -- Critical Thinking Appraisal

The Watson Glaser tests five distinct critical thinking skills, each with its own rules. The sections build in difficulty and the rules shift -- read what each section is asking before you answer. Timing: approximately 30 minutes for 40 questions in the Public Health version.

Section 1 -- Inference

Options: A. True | B. Probably True | C. Insufficient Data | D. Probably False | E. False This is the only section where you may draw on generally-accepted real-world knowledge to support your answer.

Trap 1.1

True or False requires the passage to state it explicitly

To select True, the passage must directly and unambiguously state that the inference is correct. To select False, the passage must directly and unambiguously contradict it. If neither condition is met, you are working in the Probably True / Probably False / Insufficient Data zone -- and you must decide whether common knowledge pushes you toward probably, or whether there simply is not enough to judge.

Passage: 'The school film club screened Great Expectations to Class A. Class B read the book. On all comprehension tests, Class A scored higher.'

Statement: 'Class A would score higher on a test about Oliver Twist.'

WRONG -- True. (The passage only covers Great Expectations; films vs books for other novels is untested.)

RIGHT -- Insufficient Data. The passage gives no information about other novels or other film screenings.

Statement: 'The teacher concluded that films are always a better teaching tool than books.'

WRONG -- True. ('Always' is absolute; the passage covers one experiment, one novel.)

RIGHT -- Probably True. The teacher 'felt the experiment was a success', suggesting this conclusion, but 'always' and other novels are not stated. Probably True is the strongest defensible answer.

Trap 1.2

Correlation in the passage does not equal causation -- and often means Insufficient Data

When a passage reports that two things occur together, candidates rush to infer that one causes the other. But unless the passage explicitly attributes causation, you cannot. Equally, the passage may give you too little information to determine whether an inference is true OR false -- in which case the answer is C, not D.

Passage: 'In a study of 500 adults, those who reported drinking green tea daily had a 30% lower rate of cardiovascular disease than non-drinkers.'

Statement: 'Drinking green tea reduces the risk of cardiovascular disease.'

WRONG -- True. (The study shows association, not causation. Confounders could explain the difference.)

WRONG -- Probably False. (Nothing in the passage contradicts the statement; we simply cannot determine it.)

RIGHT -- Insufficient Data. The passage reports a correlation. Without a controlled trial or explicit causal claim, we cannot determine whether the statement is true or false.

Statement: 'Green tea drinkers in the study had healthier diets overall.'

RIGHT -- Insufficient Data. The passage says nothing about diet -- we have no information either way.

Trap 1.3

"Expected", "likely", "scheduled" -- hedge words change True to Probably True

Hedge words in the passage introduce uncertainty. A statement presented as definite fact may only be Probably True because the passage itself was not definite. Similarly, an absolute statement in the inference (e.g. 'always', 'never', 'all') that goes beyond what the passage guarantees should be marked down from True to Probably True or even Insufficient Data.

Passage: 'The new outpatient clinic is scheduled to open in March and is expected to reduce waiting times by up to 40%.'

Statement: 'The clinic will open in March.'

WRONG -- True. ('Scheduled' means planned, not guaranteed. Delays happen.)

RIGHT -- Probably True. Scheduled strongly suggests it, but is not a certainty.

Statement: 'Waiting times will fall by at least 40% when the clinic opens.'

WRONG -- Probably True. ('Up to 40%' means the reduction could be anywhere from 0% to 40%.)

RIGHT -- Probably False. 'Up to 40%' is a ceiling, not a floor. A reduction of 'at least 40%' contradicts the passage's wording.

Statement: 'The clinic will always reduce waiting times once open.'

RIGHT -- Insufficient Data. 'Up to 40%' is an estimate for initial impact. Long-term or universal effects are not addressed.

Trap 1.4

Explicit contradiction = False, not Probably False

Probably False means the passage makes the statement unlikely but does not directly contradict it. False means the passage states something that directly and unambiguously rules out the inference. Candidates routinely choose Probably False when the passage is actually explicit enough to warrant False.

Passage: 'The conference is open to registered delegates only. Walk-in attendance is not permitted.'

Statement: 'Members of the public can attend the conference without registering.'

WRONG -- Probably False. (The passage is not merely suggesting this is unlikely -- it states it directly.)

RIGHT -- False. The passage explicitly states walk-in attendance is not permitted. The statement is directly contradicted.

Section 2 -- Recognising Assumptions

Options: A. Assumption made | B. Assumption not made An assumption is an unstated premise that the speaker takes for granted. Ask: if this assumption were false, would the statement fall apart?

Trap 2.1

The necessity test -- plausible is not the same as assumed

The question is not whether the assumption is reasonable, or even true. The question is whether the statement logically requires the assumption in order to hold. If you can imagine the statement being true even if the assumption were false, the assumption is NOT made. This is the most common source of errors in this section.

Statement: 'We should install air purifiers in all hospital wards to improve patient outcomes.'

Assumption A: 'Air quality affects patient recovery.'

RIGHT -- Assumption made. Without this, the recommendation makes no sense. If air quality had no effect on recovery, installing purifiers to improve outcomes would be pointless.

Assumption B: 'All hospitals currently have poor air quality.'

WRONG -- Assumption made. (Sounds plausible but is not required. The statement could be a precautionary measure even in hospitals with adequate air quality.)

RIGHT -- Assumption not made. The recommendation could stand even if only some hospitals have poor air quality.

Assumption C: 'Air purifiers are affordable for all hospitals.'

RIGHT -- Assumption made. Recommending installation of purifiers in 'all' wards implicitly assumes this is financially feasible. If it were impossible to afford them, the recommendation would be meaningless.

Trap 2.2

Assumptions vs conclusions -- do not confuse what is taken for granted with what is being argued

An assumption underpins the argument without being stated. A conclusion is what the argument is trying to prove. A common error is marking the conclusion of the argument as an assumed premise.

Statement: 'Since physical activity improves mental health, all schools should increase PE time.'

Assumption: 'Schools have a responsibility for students' mental health.'

RIGHT -- Assumption made. The recommendation only makes sense if you accept that schools should be doing something about mental health in the first place.

Assumption: 'Physical activity improves mental health.'

WRONG -- Assumption made. This is explicitly stated in the argument -- it is the premise, not an unstated assumption.

RIGHT -- Assumption not made. It is stated outright, not taken for granted.

Section 3 -- Deduction

Options: A. Conclusion follows | B. Conclusion does not follow Pure logic only. Accept all premises as true -- even if they seem unusual. Use no outside knowledge.

Trap 3.1

Reversing the direction of a rule -- All A are B does not mean All B are A

A conditional statement (if A then B, or all A are B) only works in one direction unless the passage explicitly states the reverse. Candidates frequently flip the direction and conclude something the premises do not support.

Premises: 'All registered Public Health trainees have a training number. Sarah has a training number.'

Conclusion: 'Sarah is a registered Public Health trainee.'

WRONG -- Conclusion follows. (Other professionals also have training numbers. Having a number does not prove Sarah is a PH trainee.)

RIGHT -- Conclusion does not follow. The rule says all PH trainees have numbers, not that everyone with a number is a PH trainee.

Premises: 'All registered Public Health trainees have completed an induction. Marcus is a registered PH trainee.'

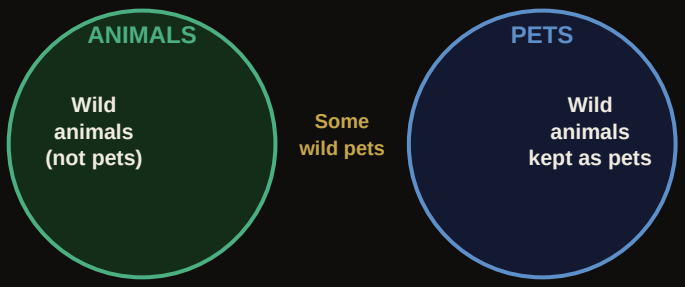
Conclusion: 'Marcus has completed an induction.'

RIGHT -- Conclusion follows. Marcus IS a PH trainee, so the rule applies directly. The direction is correct here.

Trap 3.2

"Some" is not "all" -- overgeneralising from a partial statement

"Some" means at least one, possibly many, but not necessarily all. A conclusion that requires "all" or "most" cannot follow from a premise that only establishes "some". Venn diagrams below show why:



Premises:
"Some animals are pets."
"All pets are animals."

WRONG conclusion:
"All animals are pets."

RIGHT conclusion:
"Some animals are pets"

Premises: 'Some nurses work night shifts. All night shift workers receive an allowance.'

Conclusion: 'Some nurses receive an allowance.'

RIGHT -- Conclusion follows. The nurses who work nights (some of them) definitely receive the allowance. 'Some nurses' is valid.

Conclusion: 'All nurses receive an allowance.'

WRONG -- Conclusion follows. (Only those who work nights get the allowance; nurses who don't work nights may not.)

RIGHT -- Conclusion does not follow. 'Some' nurses work nights, so only 'some' nurses necessarily get the allowance. 'All' is not established.

Trap 3.3

Real-world knowledge must be completely ignored -- even when premises seem wrong

The premises in Section 3 may be fictitious or contradict real-world facts. You must accept them as true within the context of the question and reason only from what is stated. Bringing in outside knowledge is the most common way candidates lose marks in this section.

Premises: 'All mammals can fly. Whales are mammals.' Conclusion: 'Whales can fly.'

WRONG -- Does not follow. (You know whales cannot fly in real life.)

RIGHT -- Conclusion follows. Within these premises, the logic is valid. Your real-world knowledge is irrelevant here.

Section 4 -- Interpretation

Options: A. Conclusion follows | B. Conclusion does not follow The conclusion must follow beyond reasonable doubt based only on what the passage states. No external knowledge.

Critical distinction

Section 4 uses real passages but bans real-world knowledge -- the opposite of Section 1

In Section 1 you were allowed to use common knowledge to support inferences. Section 4 reverses this completely. You must treat the passage as your only source of truth, even when the subject matter is familiar. If you find yourself thinking 'but everyone knows that...' -- stop. That reasoning is not permitted here.

Passage: 'In a trial of 200 patients, those given drug X reported a 45% reduction in symptom severity compared to placebo.'

Conclusion: 'Drug X is effective at treating this condition.'

WRONG -- Conclusion follows. (One trial with patient-reported outcomes is not sufficient to establish efficacy by clinical standards -- but that is outside knowledge.)

RIGHT -- Conclusion follows. Within the passage alone, a 45% reduction vs placebo in 200 patients is presented as evidence of effectiveness. We judge only by what the passage provides.

Note: This is genuinely harder than Section 3 because passages feel real and trigger your existing knowledge. Actively suppress it.

Trap 4.1

Correlation vs causation -- same trap as Section 1, but now without real-world rescue

In Section 1, common knowledge could sometimes save you. In Section 4, you have only the passage. If the passage shows an association but makes no causal claim, a conclusion asserting causation does not follow.

Passage: 'Local authorities that invested most heavily in cycling infrastructure saw the largest reductions in car traffic over the following decade.'

Conclusion: 'Investing in cycling infrastructure causes a reduction in car traffic.'

WRONG -- Conclusion follows. (The passage shows correlation across authorities, not a controlled causal study.)

RIGHT -- Conclusion does not follow. The passage reports association. Other factors (fuel prices, urban density, demographics) could explain the reduction. No causal mechanism is stated.

Conclusion: 'Some local authorities that invested in cycling infrastructure saw reductions in car traffic.'

RIGHT -- Conclusion follows. This is a weaker, directly-supported claim. 'Most heavily' implies all invested to some degree, and all saw reductions. 'Some' is safely within what the passage states.

Section 5 -- Evaluation of Arguments

Options: A. Argument Strong | B. Argument Weak An argument must be directly relevant to the question AND substantive/important. Both conditions must hold.

Trap 5.1

Relevant but not strong -- on-topic arguments that still fail the quality test

Many arguments address the right topic but rely on flawed reasoning, anecdote, or trivial points. Relevance is necessary but not sufficient. The argument must also stand up logically.

Question: 'Should sugar be taxed to reduce obesity rates?'

Argument: 'No; my neighbour lost weight without changing his sugar intake at all.'

WRONG -- Strong. (It is relevant to obesity and sugar -- but a single anecdote cannot disprove a population-level policy.)

RIGHT -- Weak. Anecdotal evidence from one person cannot support or undermine a national public health policy.

Argument: 'Yes; evidence from Mexico shows a 12% reduction in sugary drink consumption following introduction of a sugar tax, with lower-income groups showing the greatest response.'

RIGHT -- Strong. Directly relevant, based on empirical evidence, addresses population behaviour and equity -- substantive and logically sound.

Trap 5.2

Your personal agreement with the argument is completely irrelevant

Candidates frequently mark arguments as Strong because they agree with the conclusion, or Weak because they disagree. You are evaluating the quality of the reasoning, not the truth of the conclusion. A well-reasoned argument for a position you think is wrong is still Strong. A poor argument for a position you agree with is still Weak.

Question: 'Should hospitals be privately owned?'

Argument: 'Yes; private ownership would obviously lead to better services because competition always improves quality.'

RIGHT -- Weak. 'Obviously' and 'always' are assertions, not evidence. No data or mechanism is given. The reasoning is circular.

Quick reference

Patterns that almost always indicate a Weak argument

Anecdote ('My colleague tried this...') | Appeals to tradition ('We have always done it this way') | Emotional appeals without evidence | 'Always' or 'never' without proof | Irrelevant comparisons ('Other countries do not do this') | Cost-only objections when cost is not the subject | Circular reasoning ('It is good because it is beneficial') | Non-sequiturs (argument does not address the question asked)