Charta | LESSON NOTES

Application questions: carry the rule

Verbal Reasoning

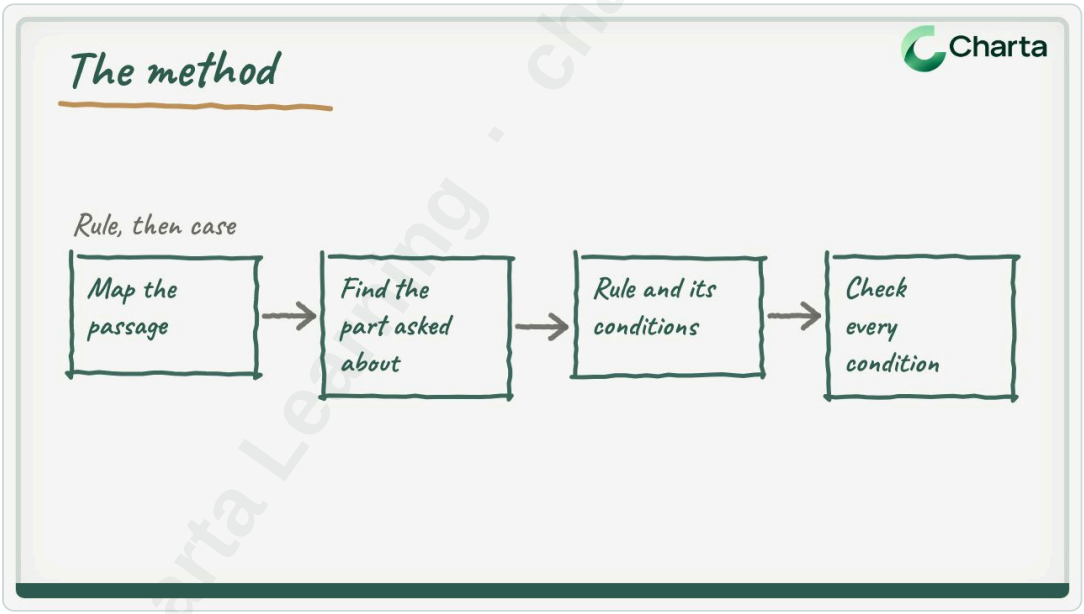
1 What the question asks

- Would most likely; best supports; most clearly supports
- The answer is a new case, not in the passage
- The rule is in the passage
- Wrong choices miss one condition of the rule

IN THE LESSON

- Application questions come in several forms.
- Based on the passage, a scientist would be most likely to.
- Which finding would the author regard as best supporting a claim?
- Which case would the reasoning most clearly support?
- In each, the answer is not in the passage.
- It is a new example.
- But the rule you need is in the passage, so outside knowledge still does not help.
- The skill is translation.
- You turn the passage's idea into a general rule, with all its conditions, and then check each new case against that rule.
- Most wrong choices fit part of the rule but miss one condition, or fit a different part of the passage.

2 The method



IN THE LESSON

- Here is the method.
- Step one, read the passage and map it.
- Step two, find the part of the passage the question points to: a claim, a paragraph or a line of reasoning.
- Step three, write the rule in general words, and list its conditions.
- For example: a rule applies when the offeror chose the route, and set no condition, and delivery is slow and unconfirmed.
- Step four, test each choice against every condition.
- The right case meets all of them.
- Why list the conditions?
- Because a choice that meets three conditions out of four sounds right, and only a list catches the missing one.

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3 The traps in the wrong choices

- The opposite of what the rule says
- Too broad: beyond the rule's conditions
- A missing condition
- Supports a different claim, or distorts a detail

IN THE LESSON

- Here are the traps, by name.
- The first is the opposite: a case the rule says should be handled the other way, such as counting a surge as a sign of cooling.
- The second is too broad: it stretches the rule beyond its conditions, such as excluding every glacier that moves, when only surging ones are excluded.
- The third is a missing condition: a case that matches the rule on most points but lacks one that matters.
- The fourth supports a different claim: a finding that fits another paragraph's point, not the one the question names.
- And the fifth is distorted: it takes a detail of the passage and gives it a meaning the passage does not give it.

4 Question 1: surging glaciers, part one

- Most glaciers advance and retreat slowly, their fronts moving a few metres a year in response to changes in snowfall and temperature. A small minority behave very differently. For decades such a glacier may creep along or even thin and recede; then, over a period of months to a few years, it flows tens or hundreds of times faster than usual, its front lurching forward by kilometres before the glacier falls quiet again. These episodes, called surges, recur at fairly regular intervals for a given glacier, and they appear to bear little relation to the climate of the years in which they occur.

IN THE LESSON

- Our first passage is the easy one, about glaciers that suddenly race forward.
- Read along with me.
- Most glaciers advance and retreat slowly, their fronts moving a few metres a year in response to changes in snowfall and temperature.
- A small minority behave very differently.
- For decades such a glacier may creep along or even thin and recede; then, over a period of months to a few years, it flows tens or hundreds of times faster than usual, its front lurching forward by kilometres before the glacier falls quiet again.
- These episodes, called surges, recur at fairly regular intervals for a given glacier, and they appear to bear little relation to the climate of the years in which they occur.

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5 Question 1: surging glaciers, part two

- That independence from climate is the key to explaining them. A surge seems to be triggered not by outside conditions but by changes at the base of the glacier. During the quiet phase, ice accumulates in the upper reaches, steepening the glacier and increasing the pressure at its bed. Meltwater produced by friction and by heat from the ground below collects beneath the ice. In most glaciers such water drains away through channels; if those channels become choked, water pressure rises until the ice is partly lifted from its bed and slides with little resistance. When the drainage reopens, often abruptly in a burst of muddy water from the glacier's front, the surge ends.
- Because surges are internally driven, a surging glacier's advance cannot be taken as a sign that the regional climate has turned colder or snowier. Scientists who reconstruct past climates from the former positions of glacier fronts have therefore learned to exclude surge-type glaciers from their samples, lest a surge be mistaken for evidence of cooling.

IN THE LESSON

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- When the drainage reopens, often abruptly in a burst of muddy water from the glacier's front, the surge ends.
- Because surges are internally driven, a surging glacier's advance cannot be taken as a sign that the regional climate has turned colder or snowier.
- Scientists who reconstruct past climates from the former positions of glacier fronts have therefore learned to exclude surge-type glaciers from their samples, lest a surge be mistaken for evidence of cooling.

6 Question 1: map the passage

Surging glaciers: the map

Paragraph 1	most glaciers slow; some surge	**two kinds**
Paragraph 2	surges come from inside	**cause**
Paragraph 3	scientists leave surgers out	**rule**
Rule	climate data: omit surge-type	**apply**

IN THE LESSON

- Here is the map.
- Paragraph one: most glaciers move slowly in response to snowfall and temperature, but a few surge, racing forward at fairly regular intervals, with little relation to the climate.
- Paragraph two: surges are triggered from inside, by water trapped under the ice.
- Paragraph three gives the rule we need: because surges are internally driven, a surging glacier's advance is not a sign of a colder climate, so scientists who reconstruct past climates leave surge-type glaciers out of their samples.
- The question asks what such a scientist would do.
- Our rule in general words: keep glaciers that respond to climate, and leave out glaciers known to surge at regular intervals.
- Now find the case that fits.

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7 Question 1: the question

- Based on the passage, a scientist reconstructing past climates from the positions of glacier fronts would be most likely to:
- A. leave out a glacier known to advance suddenly at regular intervals
- B. treat a sudden advance of a surge-type glacier as evidence of colder conditions
- C. rely mainly on surge-type glaciers because their advances are easy to identify
- D. exclude every glacier whose front has moved during recent decades
- E. count bursts of muddy water from a glacier's front as signs of regional warming

IN THE LESSON

- Here is the question, and the five choices.
- Based on the passage, a scientist reconstructing past climates from the positions of glacier fronts would be most likely to: Choice A.
- leave out a glacier known to advance suddenly at regular intervals Choice B.
- treat a sudden advance of a surge-type glacier as evidence of colder conditions Choice C.
- rely mainly on surge-type glaciers because their advances are easy to identify Choice D.
- exclude every glacier whose front has moved during recent decades Choice E.
- count bursts of muddy water from a glacier's front as signs of regional warming Which case fits the rule, with nothing added?

8 Question 1: test each choice

Based on the passage, a scientist reconstructing past climates ...

A: leave out a regular surger	exactly the rule	**the answer**
B: a surge means colder	the passage says it does not	**opposite**
C: rely mainly on surgers	they are left out	**opposite**
D: exclude every moving glacier	ordinary ones are the data	**too broad**
E: muddy bursts mean warming	they end a surge	**distorted**

IN THE LESSON

- Choice A fits the rule exactly: leave out a glacier known to advance suddenly at regular intervals.
- That is a surge-type glacier.
- Choice B treats a surge as evidence of colder conditions, which the passage says is exactly the mistake to avoid.
- Opposite.
- Choice C relies mainly on surge-type glaciers, the opposite of excluding them.
- Choice D excludes every glacier whose front has moved.
- That is too broad.
- Ordinary glaciers move in response to climate, which is what makes them useful.
- Choice E treats bursts of muddy water as a sign of warming, but in the passage they mark the end of a surge, as the drainage reopens.
- Distorted.
- The answer is A.

9 Question 2: grammar and evidence, part one

- In English, a speaker can report that it rained last night without indicating how she knows. She may add 'I saw it' or 'apparently', but nothing in the grammar requires her to. In many of the world's languages, from Turkish and Quechua to numerous languages of the Amazon, the matter is otherwise. These languages mark evidentiality: a verb or sentence must carry a form indicating the source of the speaker's information, distinguishing, depending on the language, between what was seen directly, what was inferred from traces and what was heard from others.

IN THE LESSON

- Our second passage is a medium one, about languages whose grammar marks how a speaker knows something.
- The question points to a claim in the second paragraph, so pay special attention there.
- In English, a speaker can report that it rained last night without indicating how she knows.
- She may add 'I saw it' or 'apparently', but nothing in the grammar requires her to.
- In many of the world's languages, from Turkish and Quechua to numerous languages of the Amazon, the matter is otherwise.
- These languages mark evidentiality: a verb or sentence must carry a form indicating the source of the speaker's information, distinguishing, depending on the language, between what was seen directly, what was inferred from traces and what was heard from others.

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10 Question 2: grammar and evidence, part two

- It is tempting to conclude that speakers of such languages must be more careful about evidence, or that they think about knowledge differently from speakers of English. The conclusion does not follow as readily as it seems. A grammatical requirement to choose a form is not the same as a habit of scrutinising sources; a speaker can choose the reported form for a rumour as automatically as an English speaker chooses a past tense. Studies of children learning such languages have found that they master the grammatical markers well before they perform reliably on tasks that require them to reason explicitly about how someone knows something, which suggests that using the forms and reflecting on evidence are partly separate abilities.

IN THE LESSON

- It is tempting to conclude that speakers of such languages must be more careful about evidence, or that they think about knowledge differently from speakers of English.
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- A grammatical requirement to choose a form is not the same as a habit of scrutinising sources; a speaker can choose the reported form for a rumour as automatically as an English speaker chooses a past tense.
- Studies of children learning such languages have found that they master the grammatical markers well before they perform reliably on tasks that require them to reason explicitly about how someone knows something, which suggests that using the forms and reflecting on evidence are partly separate abilities.

11 Question 2: grammar and evidence, part three

- Nor is it obvious that the forms track evidence in any simple way. In several languages, speakers use the direct evidence form to express certainty or personal commitment, even about events they did not witness, and use the reported form to distance themselves from a claim. Evidential grammar, on this view, encodes not only how a speaker knows something but also how she positions herself toward what she says.

IN THE LESSON

- Read on with me: here is the next paragraph.
- Nor is it obvious that the forms track evidence in any simple way.
- In several languages, speakers use the direct evidence form to express certainty or personal commitment, even about events they did not witness, and use the reported form to distance themselves from a claim.
- Evidential grammar, on this view, encodes not only how a speaker knows something but also how she positions herself toward what she says.

12 Question 2: map the passage

Grammar and evidence: the map

Paragraph 1	some grammars mark the source	**evidentials**
Paragraph 2	using forms is not reflecting	**the claim**
Paragraph 3	forms also show stance	**another point**
Rule	uses forms, yet cannot reflect	**apply**

IN THE LESSON

- Here is the map.
- Paragraph one: some languages require every sentence to mark how the speaker knows: seen, inferred or heard from others.
- Paragraph two: it is tempting to think such speakers are more careful about evidence, but the author disagrees.
- Children master the forms well before they can reason explicitly about how someone knows something, which suggests that using the forms and reflecting on evidence are partly separate abilities.
- Paragraph three makes a different point: the forms also express a speaker's stance.
- The question asks what finding would best support the claim in paragraph two.
- Our rule: to show two abilities are separate, find people who have one ability but not the other.
- So predict: people who use the forms perfectly, yet cannot reflect on evidence when asked.

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13 Question 2: the question

- Which of the following findings would the author regard as best supporting the claim, in the second paragraph, that using evidential forms and reflecting on evidence are partly separate abilities?
- A. Children learning an evidential language use the reported form more often for rumours than for events they saw
- B. Adults who use the correct evidential forms in every sentence often cannot say whether an acquaintance's account was firsthand when asked
- C. Speakers of one evidential language use the direct evidence form to express certainty about events they did not themselves witness, even when others reported them
- D. Speakers of evidential languages do better than English speakers on tests of remembering the source of a statement
- E. Children learning an evidential language misuse the forms in the same cases in which they misjudge how others know things

IN THE LESSON

- Here is the question, and the five choices.
- Which of the following findings would the author regard as best supporting the claim, in the second paragraph, that using evidential forms and reflecting on evidence are partly separate abilities?
- Choice A.
- Children learning an evidential language use the reported form more often for rumours than for events they saw Choice B.
- Adults who use the correct evidential forms in every sentence often cannot say whether an acquaintance's account was firsthand when asked Choice C.
- Speakers of one evidential language use the direct evidence form to express certainty about events they did not themselves witness, even when others reported them Choice D.
- Speakers of evidential languages do better than English speakers on tests of remembering the source of a statement Choice E.
- Children learning an evidential language misuse the forms in the same cases in which they misjudge how others know things To show two abilities are separate, what kind of finding do you need?

14 Question 2: test each choice

Which of the following findings would the author regard as best ...

A: children use the forms right	one ability only; no contrast	**half the rule**
B: fluent, yet cannot say source	one ability without the other	**the answer**
C: direct form for certainty	the stance point, paragraph 3	**other claim**
D: better memory for sources	the tempting view	**opposite**
E: errors happen together	points to one ability	**opposite**

IN THE LESSON

- Choice A shows children using the reported form correctly.
- That shows one ability, but says nothing about the other, so it cannot show they are separate.
- Half the rule.
- Choice B fits: adults who use the correct forms in every sentence, yet often cannot say whether an account was firsthand.
- One ability present, the other missing, so the two are partly separate.
- Choice C, using the direct form to express certainty, supports the point of paragraph three, about stance, not the claim in paragraph two.
- Choice D, better memory for sources, is the tempting conclusion the author rejects, and it would suggest the abilities go together.
- Choice E, errors in both happening together, also points to a single ability.
- Opposite.
- The answer is B.

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15 Question 3: the mailbox rule, part one

- Under the rule that English and American courts adopted in the nineteenth century, an acceptance of a contract offer sent by post took effect the moment the letter was posted, not when it arrived. The mailbox rule, as it came to be called, settled a practical difficulty. Letters took days to travel, and someone had to bear the risk that the offer would be withdrawn, or the letter lost, while the acceptance was in transit. Judges reasoned that the person who made the offer had chosen to invite a reply by post and could protect himself by stating that he would be bound only on receipt.

IN THE LESSON

- Our third passage is a hard one, about when an acceptance of a contract offer takes effect.
- If you watched the detail lesson, you know it already.
- This time we must carry the judges' reasoning to new cases.
- Under the rule that English and American courts adopted in the nineteenth century, an acceptance of a contract offer sent by post took effect the moment the letter was posted, not when it arrived.
- The mailbox rule, as it came to be called, settled a practical difficulty.
- Letters took days to travel, and someone had to bear the risk that the offer would be withdrawn, or the letter lost, while the acceptance was in transit.
- Judges reasoned that the person who made the offer had chosen to invite a reply by post and could protect himself by stating that he would be bound only on receipt.

16 Question 3: the mailbox rule, part two

- The spread of the telephone and of other instantaneous means of communication unsettled the rule's foundations. For acceptances spoken over the telephone, courts held that acceptance took effect only when it was heard by the offeror, since the speaker could tell at once whether the line had failed and repeat himself. Instantaneous communication, the courts reasoned, removes the period of uncertainty that justified the postal rule, and it places the risk of a failed message on the party best able to notice it.

IN THE LESSON

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- For acceptances spoken over the telephone, courts held that acceptance took effect only when it was heard by the offeror, since the speaker could tell at once whether the line had failed and repeat himself.
- Instantaneous communication, the courts reasoned, removes the period of uncertainty that justified the postal rule, and it places the risk of a failed message on the party best able to notice it.

17 Question 3: the mailbox rule, part three

- Electronic mail poses a harder case than either. A message is usually delivered within seconds, which suggests treating it like a telephone call, yet the sender typically has no immediate confirmation that it was received or read, which suggests treating it like a letter. Courts and legislatures have not answered uniformly. Some statutes now provide that an electronic message is received when it enters a system that the recipient has designated, regardless of whether it is opened, an approach that borrows from both traditions without following either entirely.

IN THE LESSON

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- Courts and legislatures have not answered uniformly.
- Some statutes now provide that an electronic message is received when it enters a system that the recipient has designated, regardless of whether it is opened, an approach that borrows from both traditions without following either entirely.

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18 Question 3: map the passage

The mailbox rule: the map

Paragraph 1	post: chosen; he could protect	**the reasoning**
Paragraph 2	telephone: instant; on hearing	**contrast**
Paragraph 3	email: no single answer	**open**
Rule	chosen, slow, no condition	**apply**

IN THE LESSON

- Here is the map.
- Paragraph one: a posted acceptance took effect when posted.
- Letters were slow, someone had to bear the risk, and the judges put it on the offeror, because he had chosen to invite a reply by post and could protect himself by requiring receipt.
- Paragraph two: by telephone, acceptance takes effect when heard, because instant messages remove the uncertainty.
- Paragraph three: email is unsettled.
- Now write the first paragraph's reasoning as a rule with conditions.
- Effective when sent if: one, the offeror chose the route; two, delivery is slow and uncertain; and three, the offeror set no condition requiring receipt, though he could have.
- We need a case that meets all three conditions.

19 Question 3: the question

- The reasoning that the passage attributes to the courts in the first paragraph would most clearly support treating which of the following acceptances as effective when sent rather than when received?
- A. A reply posted to an offeror who never asked for an answer by post but who is away on a long trip
- B. A reply sent by slow courier, with no sign of delivery, to an offeror who invited that route and set no condition
- C. A reply sent by email that arrives in seconds and generates an automatic delivery receipt
- D. A reply sent by post to an offeror who stated that she would be bound only on receipt
- E. A reply sent by email to an address the offeror never designated, with no sign that it has arrived

IN THE LESSON

- Here is the question, and the five choices.
- The reasoning that the passage attributes to the courts in the first paragraph would most clearly support treating which of the following acceptances as effective when sent rather than when received?
- Choice A.
- A reply posted to an offeror who never asked for an answer by post but who is away on a long trip Choice B.
- A reply sent by slow courier, with no sign of delivery, to an offeror who invited that route and set no condition Choice C.
- A reply sent by email that arrives in seconds and generates an automatic delivery receipt Choice D.
- A reply sent by post to an offeror who stated that she would be bound only on receipt Choice E.
- A reply sent by email to an address the offeror never designated, with no sign that it has arrived Check each case against all three conditions.

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20 Question 3: test each choice

The reasoning that the passage attributes to the courts in the ...

A: post never invited; owner away	the route was not chosen	**missing**
B: invited slow courier, no terms	meets all three conditions	**the answer**
C: email with a quick receipt	instant and confirmed	**opposite**
D: post, bound only on receipt	she protected herself	**missing**
E: email to an unchosen address	the route was not chosen	**missing**

IN THE LESSON

- Choice A is a posted reply, but the offeror never asked for an answer by post, so condition one fails.
- Choice B meets all three: the offeror invited the courier route, delivery is slow with no sign of arrival, and no condition was set.
- The judges' reasoning supports treating it as effective when sent.
- Choice C is an email that arrives in seconds with a delivery receipt.
- That is like the telephone: no period of uncertainty, so it points the other way.
- Choice D is the tempting one.
- It is a posted reply, but the offeror said she would be bound only on receipt.
- She used exactly the protection the judges mentioned, so condition three fails.
- Choice E goes to an address the offeror never chose, so condition one fails again.
- The answer is B.

21 Accurate and quick

- Map as you read
- Find the exact part the question names
- Write the rule; number its conditions
- Cross out a choice when one condition fails
- Separate? Look for one without the other

IN THE LESSON

- Some habits that keep you accurate and quick.
- First, map the passage as you read.
- Second, find exactly which part of the passage the question names: a claim, a paragraph, the reasoning of one group.
- Application questions often place tempting choices from a different paragraph.
- Third, write the rule in general words, with its conditions numbered, even if there are only two.
- Fourth, check each choice against every condition, and cross it out as soon as one fails.
- Fifth, when the question asks what would support a claim that two things are separate, or different, look for a case where one is present and the other is missing.

22 What the three questions taught

- A short rule: leave out the surgers
- Separate abilities: one without the other
- Three conditions; each trap failed one
- Write the rule, then check every case

IN THE LESSON

- Look back at the three applications.
- In the glacier passage, the rule was short: leave out glaciers that surge, and the traps were its opposite, a version stretched too far, and a detail given the wrong meaning.
- In the language passage, the claim was that two abilities are separate, so the right finding showed one without the other, and the traps either showed only one ability, showed them together, or supported the stance point from another paragraph.
- In the mailbox passage, the rule had three conditions, and each wrong choice failed one of them.
- Every time, a rule with its conditions written out made the choice clear.

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23 Quick check

1. A case meets three of the rule's four conditions. Answer?
   Answer: No: it must meet every condition.
2. Which finding shows two skills are separate?
   Answer: Someone with one skill but not the other.
3. A choice supports a point from another paragraph. Answer?
   Answer: No: it supports a different claim.

IN THE LESSON

- A quick check.
- Pause after each question.
- Question one.
- A choice matches a rule on three of its four conditions.
- Is it the answer?
- The answer is no.
- The right case meets every condition.
- One missing condition is a trap.
- Question two.
- A question asks which finding supports the claim that two skills are separate.
- What kind of finding do you want?
- The answer: people who have one skill but not the other.
- Question three.
- A choice supports a point the author makes, but in a different paragraph from the claim the question names.
- Is it the answer?
- The answer is no.
- It supports a different claim.

24 Recap: the application method

- Find the part the question names
- Rule, with numbered conditions
- Every condition, every choice
- Name the trap in each wrong choice

IN THE LESSON

- Let us recap.
- Map the passage and find the exact part the question names.
- Write its idea as a general rule, and number the rule's conditions.
- Then test every choice against every condition, crossing it out as soon as one fails.
- Name the trap each time: the opposite, too broad, a missing condition, supports a different claim, or distorted.
- The right answer is the new case that fits the rule on every point.
- Practise this on every application question, and write the conditions down until it becomes a habit.

Summary notes for the Charta whiteboard lesson. Figures are from the lesson's made-up examples.

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