

Deductive reasoning: full practice bank: open practice pack

100 untimed questions across 10 authored sections.

Detail	Value
Pack	cognitive-skills-deductive-reasoning
Source	cognitive-skills
Pack version	v1
Worksheet items	100
Authored hints	0
Worked explanations	100

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Learner worksheet

One hundred untimed items in ten themed sections, building from simple universal statements to chained conditionals and constraint puzzles. Treat every statement in a prompt as given, use nothing from outside it, and choose only the conclusion that must follow.

Choose one answer for each item. For a delayed-recall item, read its study text, cover it, and then answer without looking back.

Universal statements: all and every

Warm up by applying statements that cover an entire group, and by noticing when a rule cannot be run backwards.

1. deductive-reasoning-s01-q01

All the lamps in the Harbourside showroom are fitted with LED bulbs. The desk lamp on the corner table is in the Harbourside showroom. Which conclusion follows with certainty?

- A. The desk lamp is fitted with an LED bulb.
- B. Only desk lamps are fitted with LED bulbs.
- C. Every LED bulb in the town is in the showroom.
- D. Nothing can be concluded about the desk lamp.

Your answer: _____

2. deductive-reasoning-s01-q02

All the tools in the blue cabinet are calibrated monthly. All monthly-calibrated tools carry a dated sticker. What follows about the tools in the blue cabinet?

- A. They are all due for repair.

- B. They all carry a dated sticker.
- C. Only they carry dated stickers.
- D. Some of them carry no sticker.

Your answer: _____

3. deductive-reasoning-s01-q03

All the novels on the top shelf are hardbacks. The book Rina is holding is a hardback. What can be concluded?

- A. Rina's book came from the top shelf.
- B. Rina's book did not come from the top shelf.
- C. Rina's book may or may not have come from the top shelf.
- D. Every hardback in the building is on the top shelf.

Your answer: _____

4. deductive-reasoning-s01-q04

All apprentices at the Ferryhill yard wear steel-capped boots. Some people wearing steel-capped boots at the yard are visiting inspectors. Which statement is safe to accept?

- A. Some visiting inspectors are apprentices.
- B. No visiting inspector is an apprentice.
- C. All visiting inspectors are apprentices.
- D. Whether any apprentice is a visiting inspector remains unsettled.

Your answer: _____

5. deductive-reasoning-s01-q05

All the seeds in packet R germinate within ten days. Packet R was emptied into tray 4, and nothing else was planted there. What follows about tray 4?

- A. Every seed in tray 4 germinates within ten days.
- B. Some seeds in tray 4 take longer than ten days.
- C. Tray 4 also contains seeds from another packet.
- D. Nothing at all can be said about tray 4.

Your answer: _____

6. deductive-reasoning-s01-q06

Every parcel accepted at the Whitcombe depot has a barcode label. The parcel Devon is holding has no barcode label. What follows?

- A. It was accepted at the Whitcombe depot.
- B. It was not accepted at the Whitcombe depot.
- C. It will be accepted tomorrow instead.
- D. Nothing follows about the parcel.

Your answer: _____

7. deductive-reasoning-s01-q07

All the recipes in Chapter 2 use butter. None of the recipes in Chapter 5 uses butter. What follows?

- A. The Chapter 5 recipes use oil instead.
- B. Some Chapter 5 recipes also appear in Chapter 2.
- C. No recipe appears in both Chapter 2 and Chapter 5.
- D. Chapter 2 contains more recipes than Chapter 5.

Your answer: _____

8. deductive-reasoning-s01-q08

Consider this incomplete argument: "All the coaches at the Stanmore club hold a first-aid certificate, therefore Ivo holds a first-aid certificate." Which additional statement would make the argument valid?

- A. Ivo is a coach at the Stanmore club.
- B. Ivo has been involved with the club for two years.
- C. Some coaches at the club hold a first-aid certificate.
- D. Everyone with a first-aid certificate coaches at the club.

Your answer: _____

9. deductive-reasoning-s01-q09

All the mugs on the trolley are chipped. There are eight mugs on the trolley. Which statement must be true?

- A. The café owns no unchipped mugs.
- B. Exactly one of the eight mugs is chipped.
- C. Each of the eight mugs is chipped.
- D. The trolley also holds some unchipped mugs.

Your answer: _____

10. deductive-reasoning-s01-q10

All members of the Ashlyn quartet play a stringed instrument. All students who play a stringed instrument have a locker in the west corridor. Petra has a locker in the west corridor. What follows about Petra?

- A. She is a member of the Ashlyn quartet.
- B. She plays a stringed instrument.
- C. She is not a member of the Ashlyn quartet.
- D. None of these conclusions is guaranteed.

Your answer: _____

Some, no, and not all

Work with partial and negative quantifiers, which carry far less information than universal ones, and be exact about how much they really give you.

11. deductive-reasoning-s02-q01

No member of the Cranleigh reading group has read the new Ferris novel. Owen has read the new Ferris novel. What follows?

- A. Owen has read every Ferris novel.

- B. Owen is not a member of the Cranleigh reading group.
- C. Owen joined the group only recently.
- D. Nothing follows about Owen.

Your answer: _____

12. deductive-reasoning-s02-q02

Some of the boxes in the loft contain photographs. Some of the boxes in the loft contain records. What follows?

- A. No box holds both photographs and records.
- B. At least one box holds both photographs and records.
- C. Most of the boxes hold photographs.
- D. No conclusion about overlap is justified.

Your answer: _____

13. deductive-reasoning-s02-q03

A caretaker reports: "Not all the chairs in the hall are stackable." Which statement says exactly the same thing?

- A. At least one chair in the hall is not stackable.
- B. No chair in the hall is stackable.
- C. Exactly one chair in the hall is stackable.
- D. Most of the chairs in the hall are stackable.

Your answer: _____

14. deductive-reasoning-s02-q04

No reptile in the collection is nocturnal. Some animals in the collection are nocturnal. What follows?

- A. The collection contains no reptiles at all.
- B. Every nocturnal animal in the region is in the collection.
- C. At least one animal in the collection is not a reptile.
- D. Some reptiles in the collection are nocturnal.

Your answer: _____

15. deductive-reasoning-s02-q05

Some of the volunteers at the shelter are trained in first aid. No one trained in first aid works the night shift. What follows?

- A. No volunteer works the night shift.
- B. At least one volunteer does not work the night shift.
- C. All the night-shift workers are volunteers.
- D. Nothing follows from these two statements.

Your answer: _____

16. deductive-reasoning-s02-q06

No van in the Fairhaven fleet runs on diesel. All the vans used for the airport contract belong to the Fairhaven fleet. What follows about the airport-contract vans?

- A. Some of them run on diesel.
- B. They all run on electricity.
- C. Nothing can be said about their fuel.
- D. None of them runs on diesel.

Your answer: _____

17. deductive-reasoning-s02-q07

Some of the cheeses on the board are unpasteurised. All unpasteurised cheeses on the board are marked with a red dot. What follows?

- A. At least one cheese on the board carries a red dot.
- B. Every cheese on the board carries a red dot.
- C. Only unpasteurised cheeses carry red dots.
- D. No pasteurised cheese is on the board.

Your answer: _____

18. deductive-reasoning-s02-q08

At the Tolworth registry, no unsigned form is ever filed. Rowena's form has been filed. What follows?

- A. Rowena's form was filed in error.
- B. Rowena's form may or may not have been signed.
- C. Rowena's form was signed.
- D. Nothing follows until we know who signed it.

Your answer: _____

19. deductive-reasoning-s02-q09

Two claims are made about the same shelf: "All the jars on the shelf are sealed" and "Some jars on the shelf are not sealed." What can be concluded?

- A. Both claims can be true at the same time.
- B. The two claims cannot both be true.
- C. Both claims must be false.
- D. The second claim proves the first.

Your answer: _____

20. deductive-reasoning-s02-q10

No item marked "sample" is for sale. Some items on the rear table are marked "sample". Some items on the rear table are for sale. Which statement is consistent with all three facts?

- A. Every item on the rear table is marked "sample".
- B. No item on the rear table is for sale.
- C. All the items for sale are marked "sample".
- D. The rear table holds at least two different items.

Your answer: _____

If-then statements and what they license

Practise the two reliable moves on a conditional: confirming its condition, and ruling out its result.

21. deductive-reasoning-s03-q01

If the fire alarm is tested, the reception desk is notified in advance. The fire alarm was tested this morning. What follows?

- A. The reception desk was notified in advance.
- B. The reception desk was not notified.
- C. The alarm test was cancelled.
- D. Nothing follows about the reception desk.

Your answer: _____

22. deductive-reasoning-s03-q02

If a book is overdue, a reminder is sent to the borrower. No reminder was sent to Halima. What follows about Halima's book?

- A. It is overdue.
- B. It is not overdue.
- C. It was returned earlier today.
- D. Nothing follows about it.

Your answer: _____

23. deductive-reasoning-s03-q03

If the temperature in the store room rises above 8°C, the monitoring system logs an alert. The system logged no alert overnight. What follows?

- A. The temperature did not rise above 8°C overnight.
- B. The temperature rose above 8°C overnight.
- C. The monitoring system was switched off.
- D. The temperature stayed below 4°C.

Your answer: _____

24. deductive-reasoning-s03-q04

If a shipment clears customs, it is loaded onto the Thursday lorry. This shipment cleared customs on Tuesday. What follows?

- A. It cleared customs because it was loaded.
- B. It was not loaded onto the Thursday lorry.
- C. It was loaded onto the Thursday lorry.
- D. It missed the Thursday lorry.

Your answer: _____

25. deductive-reasoning-s03-q05

Take these two statements as given: "If the valve is open, the gauge reads above zero" and "the gauge reads zero". Someone concludes that the valve is not open. Which description of that reasoning is correct?

- A. It is faulty, because it confuses a cause with its effect.
- B. It is sound: denying the stated result forces denial of the condition.
- C. It is faulty, because the gauge might be broken.
- D. It works only if the gauge is the sole indicator on the system.

Your answer: _____

26. deductive-reasoning-s03-q06

A site rule states: if a visitor enters the workshop, they must sign the day book. Farrah entered the workshop this morning. Which statement follows from the rule?

- A. Farrah is a regular visitor to the site.
- B. Farrah had to sign the day book only if asked.
- C. Farrah was required to sign the day book.
- D. Farrah had no need to sign the day book.

Your answer: _____

27. deductive-reasoning-s03-q07

If the delivery arrives before noon, the kitchen opens at one o'clock. The kitchen opened at one o'clock. What follows about the delivery?

- A. It arrived before noon.
- B. It arrived after noon.
- C. It never arrived at all.
- D. Its arrival time is not settled by these facts.

Your answer: _____

28. deductive-reasoning-s03-q08

If a candidate scores above 70, they progress to interview. Bertrand scored 68. What follows?

- A. The rule as given does not settle whether Bertrand progresses.
- B. Bertrand progresses to interview.
- C. Bertrand does not progress to interview.
- D. Bertrand must resit the paper.

Your answer: _____

29. deductive-reasoning-s03-q09

If the hall is booked, the caretaker unlocks the side door. The hall is booked on Wednesday and again on Friday. What follows?

- A. The caretaker unlocks the side door on Wednesday only.
- B. The caretaker unlocks the side door on both days.
- C. The side door stays locked on Friday.
- D. The hall cannot be booked twice in one week.

Your answer: _____

30. deductive-reasoning-s03-q10

If a claim is submitted late, it is reviewed by the appeals panel. Every claim reviewed by the appeals panel is logged with a case number. One claim has no case number. What follows?

- A. That claim was submitted late.
- B. That claim was reviewed by the panel.
- C. That claim was rejected.
- D. That claim was not submitted late.

Your answer: _____

Common conditional traps

Two tempting moves are never valid: reading a result back to its condition, and reading a missing condition forward to a missing result. Spot them here.

31. deductive-reasoning-s04-q01

If the pipes freeze, the water pressure drops. The water pressure has dropped. Which conclusion is justified?

- A. The pipes froze.
- B. The pipes did not freeze.
- C. The pipes may or may not have frozen.
- D. The drop in pressure caused the pipes to freeze.

Your answer: _____

32. deductive-reasoning-s04-q02

If Ines takes the early train, she arrives before the meeting starts. Ines did not take the early train. What follows?

- A. She arrived after the meeting started.
- B. She missed the meeting entirely.
- C. She arrived before the meeting started.
- D. Her arrival time is not determined.

Your answer: _____

33. deductive-reasoning-s04-q03

"Whenever the printer jams, the job queue stalls. The job queue stalled, so the printer jammed." What is wrong with this reasoning?

- A. Nothing. The reasoning is valid as it stands.
- B. It assumes that the queue never stalls.
- C. It treats one possible cause as the only cause.
- D. It reads "whenever" as though it meant "sometimes".

Your answer: _____

34. deductive-reasoning-s04-q04

"If a plant is a fern, it has no flowers. This plant is not a fern, so it has flowers." Which flaw does the argument contain?

- A. It treats the stated condition as the only route to the result.
- B. It reverses an otherwise correct backwards step.
- C. It relies on an unstated numerical assumption.
- D. It contains no flaw at all.

Your answer: _____

35. deductive-reasoning-s04-q05

If the alarm is armed, the green light shows. The green light is not showing. Which conclusion is valid?

- A. The alarm is armed.
- B. The alarm was armed earlier in the day.
- C. Nothing at all can be concluded.
- D. The alarm is not armed.

Your answer: _____

36. deductive-reasoning-s04-q06

Which pair of statements would let you conclude, with certainty, that the seminar was cancelled?

- A. "If the seminar was cancelled, the room was empty" and "the room was empty".
- B. "If fewer than five people enrolled, the seminar was cancelled" and "four people enrolled".
- C. "If the seminar was cancelled, the fee was refunded" and "the fee was not refunded".
- D. "If the seminar was cancelled, an email was sent" and "an email was sent".

Your answer: _____

37. deductive-reasoning-s04-q07

If a lorry weighs over 3.5 tonnes, it must use the bypass. A lorry used the bypass this morning. What follows?

- A. It weighs over 3.5 tonnes.
- B. It weighs under 3.5 tonnes.
- C. Its weight cannot be worked out from this.
- D. It broke the rule.

Your answer: _____

38. deductive-reasoning-s04-q08

"If the sensor is faulty, the reading drifts. The reading is steady." Which conclusion follows, and by which pattern?

- A. The sensor is not faulty, by denying the stated result.
- B. The sensor is faulty, by confirming the stated result.
- C. Nothing follows, because a steady reading proves nothing.
- D. The sensor is not faulty, by denying the stated condition.

Your answer: _____

39. deductive-reasoning-s04-q09

"If the tide is out, the causeway is passable. The causeway is passable, so the tide is out." Suppose you then learn that the causeway is also passable at high tide whenever the barrier is lifted. What does this show?

- A. The original conditional statement was false.
- B. The conclusion does not follow, because the result can arise another way.
- C. The reasoning was valid all along but rested on a false premise.
- D. The tide must be out whenever the barrier is lifted.

Your answer: _____

40. deductive-reasoning-s04-q10

A supervisor argues: "Every late delivery this month came from the northern depot, so any delivery from the northern depot this month was late." Which single fact would show that this reasoning is faulty?

- A. A late delivery this month came from the southern depot.
- B. The northern depot handled more deliveries than the southern one.
- C. No delivery was late this month.
- D. A northern-depot delivery this month arrived on time.

Your answer: _____

Either-or and neither-nor

Reason from statements offering alternatives, taking care over whether both options may hold at once.

41. deductive-reasoning-s05-q01

Either the meeting room is booked for training, or it is free for drop-in use. It is not booked for training. What follows?

- A. It is free for drop-in use.
- B. It is booked for training after all.
- C. It is closed for the day.
- D. Nothing follows about the room.

Your answer: _____

42. deductive-reasoning-s05-q02

Either Rafi collected the keys or Suki did, and the statement allows that both may have done so. Rafi collected the keys. What follows about Suki?

- A. Suki did not collect the keys.
- B. Suki also collected the keys.
- C. Suki collected them before Rafi did.
- D. Whether Suki collected the keys is unsettled.

Your answer: _____

43. deductive-reasoning-s05-q03

Exactly one of these two claims is true: "the parcel went by courier" and "the parcel went by post". The parcel went by post. What follows?

- A. The parcel did not go by courier.
- B. The parcel went by courier as well.
- C. Both claims turn out to be false.
- D. Nothing follows from this.

Your answer: _____

44. deductive-reasoning-s05-q04

Neither the north gate nor the east gate is open before seven o'clock. It is half past six. What follows?

- A. Only the north gate is shut.
- B. Only the east gate is shut.
- C. Both gates are shut.
- D. At least one of the gates is open.

Your answer: _____

45. deductive-reasoning-s05-q05

At least one of the following is true: the invoice was mislaid, or the supplier never sent it. The supplier's records prove that the invoice was sent. What follows?

- A. The supplier sent the invoice twice.
- B. The invoice was mislaid.
- C. The invoice was never sent.
- D. Nothing follows from this.

Your answer: _____

46. deductive-reasoning-s05-q06

"Either the film starts at seven or it starts at eight." Which statement is a correct denial of this claim?

- A. The film starts at seven.
- B. The film starts at eight.
- C. The film starts at seven and at eight.
- D. The film starts at neither seven nor eight.

Your answer: _____

47. deductive-reasoning-s05-q07

The missing folder is in the archive room, the storeroom, or the van, and nowhere else. It is not in the archive room, and it is not in the van. What follows?

- A. It is in the storeroom.
- B. It has been lost for good.
- C. It could still be in the van.
- D. Two of the three places need searching again.

Your answer: _____

48. deductive-reasoning-s05-q08

Either the code is expired or the account is suspended, and possibly both. The account is not suspended. What follows?

- A. The code is still valid.
- B. Both conditions are false.
- C. The code is expired.
- D. Nothing follows, because "possibly both" makes it uncertain.

Your answer: _____

49. deductive-reasoning-s05-q09

A rule states that a delegate may attend the workshop or the site tour, but not both. Yannick attended the site tour. What follows?

- A. Yannick also attended the workshop.
- B. Yannick did not attend the workshop.
- C. Yannick broke the rule.
- D. Yannick attended neither event.

Your answer: _____

50. deductive-reasoning-s05-q10

Three statements are offered about the same survey: "either the survey closed early or fewer than fifty replies arrived", "the survey did not close early", and "sixty replies arrived". What does the combination show?

- A. The survey closed early after all.
- B. Exactly fifty replies arrived.
- C. The first statement is confirmed by the third.
- D. The three statements cannot all be true.

Your answer: _____

Necessary and sufficient conditions

Separate what a requirement guarantees from what it merely permits, the difference decides which conclusions you may draw.

51. deductive-reasoning-s06-q01

To hire a rowing boat at Elder Lake you must be over sixteen. Priti is nineteen. What follows?

- A. Priti is entitled to hire a boat.
- B. Priti meets the age requirement, but nothing more is settled.
- C. Priti cannot hire a boat.
- D. Age is the only requirement for hiring a boat.

Your answer: _____

52. deductive-reasoning-s06-q02

A valid passport is necessary for boarding the ferry. Elspeth's passport expired last year. What follows?

- A. Elspeth will board using a different document.
- B. The passport requirement does not apply to this trip.
- C. Elspeth cannot board the ferry.
- D. Nothing follows about Elspeth.

Your answer: _____

53. deductive-reasoning-s06-q03

A league states that scoring 40 points guarantees a place in the final. Which statement expresses this correctly?

- A. Only teams with 40 points reach the final.
- B. Reaching 40 points is sufficient for a place in the final.
- C. Reaching 40 points is necessary for a place in the final.
- D. Every team in the final scored exactly 40 points.

Your answer: _____

54. deductive-reasoning-s06-q04

A notice reads: "You cannot enter the laboratory without a swipe card." What does the notice make the swipe card?

- A. Sufficient for entry.
- B. Both necessary and sufficient for entry.
- C. Irrelevant to entry.
- D. Necessary for entry.

Your answer: _____

55. deductive-reasoning-s06-q05

Membership requires two things: a completed form and a paid fee. Nils has paid the fee but has not returned the form. What follows?

- A. Nils is not yet a member.
- B. Nils is already a member.
- C. Nils only has to wait for processing.
- D. The form becomes optional once the fee is paid.

Your answer: _____

56. deductive-reasoning-s06-q06

Rain is enough on its own to cancel the village fete, and the fete was cancelled. What follows about the weather?

- A. It rained.
- B. It did not rain.
- C. The weather is not settled by this.
- D. The fete is never cancelled for any other reason.

Your answer: _____

57. deductive-reasoning-s06-q07

For the alarm to sound, both the door sensor and the motion sensor must trigger. The alarm did not sound. What follows?

- A. Both sensors failed to trigger.
- B. At least one of the two sensors did not trigger.
- C. The motion sensor triggered.
- D. The door sensor triggered.

Your answer: _____

58. deductive-reasoning-s06-q08

A grant is awarded only to applicants who live in the county. Tomasz lives in the county. What follows?

- A. Tomasz will receive the grant.
- B. Tomasz will not receive the grant.
- C. Residence in the county is enough to qualify.
- D. Tomasz meets one condition, but the award is not guaranteed.

Your answer: _____

59. deductive-reasoning-s06-q09

Suppose reaching the pass mark is the only requirement for the certificate, and Beatriz reached the pass mark. What follows?

- A. Beatriz qualifies for the certificate.
- B. Beatriz still needs a second assessment.
- C. The pass mark is merely necessary here.
- D. Nothing follows about Beatriz.

Your answer: _____

60. deductive-reasoning-s06-q10

A club states: "A recommendation from two members is necessary and sufficient for admission." Ivan has one recommendation. Which statement follows?

- A. Ivan will be admitted.
- B. Ivan may still be admitted on other grounds.
- C. Ivan will not be admitted unless a second recommendation is obtained.
- D. The rule tells us nothing about Ivan.

Your answer: _____

Only, unless, and quantifier scope

Translate awkward wording into plain if-then form before drawing any conclusion. Most errors here are translation errors.

61. deductive-reasoning-s07-q01

Only staff with a blue badge may open the stockroom. Marco opened the stockroom. What follows?

- A. Every blue-badge holder opened the stockroom.
- B. Marco may or may not hold a blue badge.
- C. Marco holds a blue badge.
- D. Marco is the only blue-badge holder.

Your answer: _____

62. deductive-reasoning-s07-q02

"Only members may borrow equipment." Which statement means the same thing?

- A. If someone borrows equipment, that person is a member.
- B. If someone is a member, that person borrows equipment.
- C. All members borrow equipment at some point.
- D. Non-members borrow equipment less often than members.

Your answer: _____

63. deductive-reasoning-s07-q03

The gate stays locked unless the warden is on site. The warden is not on site. What follows?

- A. The gate is open.
- B. The warden will arrive shortly.
- C. The gate may be either open or locked.
- D. The gate is locked.

Your answer: _____

64. deductive-reasoning-s07-q04

The match will go ahead unless the pitch is waterlogged. The match did not go ahead. What follows?

- A. The pitch was in good condition.
- B. The pitch was waterlogged.
- C. Nothing follows about the pitch.
- D. The match was rescheduled for a later date.

Your answer: _____

65. deductive-reasoning-s07-q05

Only completed applications are forwarded to the panel. One application was not forwarded to the panel. What follows?

- A. That application was incomplete.
- B. That application was complete.
- C. Whether it was complete cannot be worked out.
- D. The panel rejected that application.

Your answer: _____

66. deductive-reasoning-s07-q06

A notice at an exhibition reads: "Every child must be accompanied by an adult." Which reading does the notice support?

- A. Each child needs some adult present, not necessarily the same adult for all.
- B. One particular adult must accompany all of the children.
- C. Adults must outnumber children at the exhibition.
- D. Children may enter alone provided an adult is somewhere nearby.

Your answer: _____

67. deductive-reasoning-s07-q07

A report states: "Every reviewer read some chapter of the manuscript." Which conclusion is guaranteed?

- A. There is one chapter that every reviewer read.
- B. Every chapter was read by at least one reviewer.
- C. Each reviewer read at least one chapter.
- D. Every reviewer read the whole manuscript.

Your answer: _____

68. deductive-reasoning-s07-q08

Only if the invoice is approved will the payment be released. The payment was released. What follows?

- A. The invoice may not have been approved.
- B. The invoice was rejected.
- C. Nothing follows about the invoice.
- D. The invoice was approved.

Your answer: _____

69. deductive-reasoning-s07-q09

The library opens on a Sunday only when a volunteer is available. No volunteer was available last Sunday. What follows?

- A. The library did not open last Sunday.
- B. The library opened as usual last Sunday.
- C. A volunteer was found later in the day.
- D. Nothing follows about last Sunday.

Your answer: _____

70. deductive-reasoning-s07-q10

Two notices are posted at a fair. The first reads "Only ticket holders may enter the marquee"; the second reads "Every ticket holder may enter the marquee". Nikolai is not a ticket holder. If both notices hold, what follows?

- A. Nikolai may enter the marquee.
- B. Nikolai may not enter the marquee.
- C. Nikolai's entry depends on the second notice alone.
- D. Nothing follows about Nikolai.

Your answer: _____

Ordering, ranking, and transitivity

Build a single ordering from comparison statements, and notice when two items are never linked at all.

71. deductive-reasoning-s08-q01

Aisha finished ahead of Bruno. Bruno finished ahead of Colette. Who finished last of the three?

- A. Aisha
- B. Colette
- C. Bruno
- D. It cannot be determined.

Your answer: _____

72. deductive-reasoning-s08-q02

Box P is heavier than box Q. Box R is heavier than box Q. Which statement must be true?

- A. P is heavier than R.
- B. R is heavier than P.
- C. P and R weigh the same.
- D. Q is the lightest of the three.

Your answer: _____

73. deductive-reasoning-s08-q03

The library is north of the market. The market is north of the station. Which of the three is furthest south?

- A. The station
- B. The market
- C. The library
- D. It cannot be determined.

Your answer: _____

74. deductive-reasoning-s08-q04

Ravi is taller than Ola but shorter than Petra. Petra is shorter than Quinn. Who is the tallest of the four?

- A. Ravi
- B. Petra
- C. Quinn
- D. It cannot be determined.

Your answer: _____

75. deductive-reasoning-s08-q05

Four shops sit in a row. The baker is immediately to the left of the florist, the florist is immediately to the left of the chemist, and the chemist is immediately to the left of the newsagent. Which shop is second from the right?

- A. The florist
- B. The chemist
- C. The baker
- D. The newsagent

Your answer: _____

76. deductive-reasoning-s08-q06

Tam scored more than Ursula. Vik scored fewer than Ursula. Wen scored more than Tam. Which ordering, from highest to lowest, is certain?

- A. Tam, Wen, Ursula, Vik
- B. Wen, Ursula, Tam, Vik
- C. Ursula, Wen, Tam, Vik
- D. Wen, Tam, Ursula, Vik

Your answer: _____

77. deductive-reasoning-s08-q07

The green folder is thicker than the red one. The blue folder is thicker than the grey one. The red folder is thicker than the grey one. Which comparison cannot be settled?

- A. Green against grey
- B. Green against blue
- C. Red against grey
- D. Blue against grey

Your answer: _____

78. deductive-reasoning-s08-q08

Five parcels (black, green, red, white and yellow) are stacked one on top of another. The red parcel sits directly above the white one, the white parcel is at the bottom, the black parcel is at the top, and the green parcel is directly below the black one. Which parcel is in the middle of the stack?

- A. Red
- B. Green
- C. Yellow
- D. It cannot be determined.

Your answer: _____

79. deductive-reasoning-s08-q09

Petra is older than Quill. Quill is older than Ruben. Ruben is older than Sami. Which statement must be false?

- A. Sami is older than Petra.
- B. Petra is older than Sami.
- C. Quill is older than Sami.
- D. Petra is older than Ruben.

Your answer: _____

80. deductive-reasoning-s08-q10

Six books stand in a row, numbered one to six from the left. The atlas is somewhere to the left of the diary, the diary is somewhere to the left of the ledger, the ledger is in position five, the atlas is not in position one, and exactly one book stands between the atlas and the diary. Which position must the diary occupy?

- A. Position two
- B. Position three
- C. Position five
- D. Position four

Your answer: _____

Multi-clue elimination puzzles

Combine several short clues into one arrangement, using each clue to strike out possibilities until only one remains.

81. deductive-reasoning-s09-q01

Three colleagues (Hana, Idris and Jo) each take one of three roles at a meeting: notes, timing and welcome. Hana does not take notes. Idris takes timing. Which role does Hana take?

- A. Notes
- B. Welcome
- C. Timing
- D. It cannot be determined.

Your answer: _____

82. deductive-reasoning-s09-q02

Three cups in a row hold tea, coffee and cocoa in some order. The cup on the left does not hold cocoa. The cup in the middle holds coffee. Which drink is in the cup on the right?

- A. Tea
- B. Coffee
- C. Cocoa
- D. It cannot be determined.

Your answer: _____

83. deductive-reasoning-s09-q03

Four people (Kai, Lena, Mo and Nia) sit at desks numbered one to four in a row. Kai is at desk one. Mo is at desk three. Lena does not sit next to Kai. Which desk is Nia at?

- A. Desk two
- B. Desk three
- C. Desk four
- D. It cannot be determined.

Your answer: _____

84. deductive-reasoning-s09-q04

Three friends (Omar, Pia and Quentin) each ordered a different main course: pie, curry and salad. Omar did not order the curry. Pia ordered neither the salad nor the pie. Who ordered the curry?

- A. Omar
- B. Quentin
- C. Nobody ordered the curry.
- D. Pia

Your answer: _____

85. deductive-reasoning-s09-q05

Four students (Riya, Sol, Tam and Uma) each study a different subject: biology, chemistry, drama or economics. Riya studies drama. Tam studies chemistry. Sol studies neither biology nor chemistry. Which subject does Uma study?

- A. Chemistry
- B. Biology
- C. Economics
- D. Drama

Your answer: _____

86. deductive-reasoning-s09-q06

Three parcels (a book, a lamp and a vase) are delivered on three different days: Monday, Tuesday and Wednesday. The book does not arrive on Monday. The lamp arrives the day after the book. Which parcel arrives on Monday?

- A. The book
- B. The lamp
- C. The vase
- D. It cannot be determined.

Your answer: _____

87. deductive-reasoning-s09-q07

Four families live in flats numbered one to four, left to right. The Ahmeds live at neither end. The Bakers live at flat four. The Chens live immediately to the left of the Ahmeds. The Dutts do not live at flat one. Which flat do the Dutts live in?

- A. Flat one
- B. Flat three
- C. Flat two
- D. It cannot be determined.

Your answer: _____

88. deductive-reasoning-s09-q08

Three machines (a press, a lathe and a saw) were serviced one after another during a single morning. The saw was not serviced first. The press was serviced immediately before the saw. The lathe was not serviced last. Which machine was serviced last?

- A. The press
- B. The lathe
- C. The saw
- D. It cannot be determined.

Your answer: _____

89. deductive-reasoning-s09-q09

Five colleagues (Vera, Wes, Xan, Yara and Zeb) stand in a single queue. Xan is at the front and Zeb is at the back. Vera stands directly in front of Wes. Yara is not directly behind Xan. Who is third in the queue?

- A. Wes
- B. Vera
- C. Yara
- D. It cannot be determined.

Your answer: _____

90. deductive-reasoning-s09-q10

Three colleagues (Amara, Bo and Cleo) each chose a different city (Leeds, Malmö or Nantes) and a different travel month (April, May or June). Amara did not choose Leeds and does not travel in May. Whoever goes to Malmö travels in June. Bo travels in April. Cleo is not going to Nantes. Which city and month belong to Bo?

- A. Leeds in April
- B. Malmö in June
- C. Leeds in May
- D. Nantes in April

Your answer: _____

Chained conditionals, validity, and soundness

Follow conclusions through several linked statements, and keep the question of whether reasoning holds separate from whether its statements are true.

91. deductive-reasoning-s10-q01

If the sensor trips, the shutter closes. If the shutter closes, the production line stops. The sensor tripped. What follows?

- A. The production line stopped.
- B. The shutter stayed open.
- C. The production line kept running.
- D. Nothing follows from these statements.

Your answer: _____

92. deductive-reasoning-s10-q02

If a form is incomplete, it is returned. If a form is returned, the applicant is emailed. Sanjay was not emailed. What follows?

- A. Sanjay's form was incomplete.
- B. Sanjay's form was returned.

- C. Sanjay's form was not incomplete.
- D. Nothing follows about Sanjay's form.

Your answer: _____

93. deductive-reasoning-s10-q03

If the grant is approved, the survey begins. If the survey begins, the report is due in autumn. The report is due in autumn. What follows?

- A. The grant was approved.
- B. The survey has begun.
- C. The grant was refused.
- D. Neither the grant decision nor the survey start is settled.

Your answer: _____

94. deductive-reasoning-s10-q04

Consider this argument: "All winged creatures can swim. All penguins are winged creatures. Therefore all penguins can swim." Judging the reasoning alone, which assessment is correct?

- A. The reasoning fails because the first statement is untrue.
- B. The reasoning holds, even though one statement is untrue.
- C. The reasoning holds and both statements are true.
- D. The reasoning fails because penguins are birds.

Your answer: _____

95. deductive-reasoning-s10-q05

An argument is found to have true premises and a false conclusion. What can be concluded about the argument itself?

- A. It is invalid.
- B. It is valid but unsound.
- C. It is sound.
- D. Nothing can be said about it.

Your answer: _____

96. deductive-reasoning-s10-q06

If the tap is left running, the tank overflows. If the tank overflows, the floor is wet. The floor is dry. What follows?

- A. The tank overflowed.
- B. The tap was left running.
- C. The floor was mopped earlier.
- D. The tap was not left running.

Your answer: _____

97. deductive-reasoning-s10-q07

You are told only this chain of rules: if A then B, if B then C, and if C then D. Which single statement follows from the chain alone, without any further facts?

- A. If D then A.
- B. A is true.
- C. If not A then not D.
- D. If A then D.

Your answer: _____

98. deductive-reasoning-s10-q08

If the ferry is cancelled, the replacement coach runs. If the replacement coach runs, the car park fills by nine o'clock. The car park did not fill by nine o'clock. Which pair of conclusions follows?

- A. The coach ran, and the ferry was cancelled.
- B. The coach did not run, and the ferry was not cancelled.
- C. The coach did not run, but the ferry may still have been cancelled.
- D. Nothing follows without knowing the timetable.

Your answer: _____

99. deductive-reasoning-s10-q09

Someone argues: "If the reading is above the threshold, the valve shuts. The valve shut. Therefore the reading was above the threshold." Suppose the reading really was above the threshold on this occasion. What does that show about the reasoning?

- A. Nothing. A true conclusion can sit on top of faulty reasoning.
- B. The reasoning must be valid after all.
- C. One of the two premises must be false.
- D. The argument is therefore sound.

Your answer: _____

100. deductive-reasoning-s10-q10

Four facts hold in a workshop: if the kiln is on, the extractor runs; if the extractor runs, the side door is shut; if the side door is shut, the log sheet is signed; and the log sheet is not signed. What follows?

- A. The extractor is running.
- B. The side door is shut.
- C. The kiln is not on.
- D. Only the state of the extractor can be determined.

Your answer: _____

Authored hints

This cognitive practice source does not publish authored hints. Every item is listed as missing a hint, and no hint text is generated or inferred.

100 worksheet items do not have an authored hint. No hint text was generated for them.

Answer key

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Deductive reasoning: full practice bank: open practice pack answer key

Item	Choice	Answer
deductive-reasoning-s01-q01	A	The desk lamp is fitted with an LED bulb.
deductive-reasoning-s01-q02	B	They all carry a dated sticker.
deductive-reasoning-s01-q03	C	Rina's book may or may not have come from the top shelf.
deductive-reasoning-s01-q04	D	Whether any apprentice is a visiting inspector remains unsettled.
deductive-reasoning-s01-q05	A	Every seed in tray 4 germinates within ten days.
deductive-reasoning-s01-q06	B	It was not accepted at the Whitcombe depot.
deductive-reasoning-s01-q07	C	No recipe appears in both Chapter 2 and Chapter 5.
deductive-reasoning-s01-q08	A	Ivo is a coach at the Stanmore club.
deductive-reasoning-s01-q09	C	Each of the eight mugs is chipped.
deductive-reasoning-s01-q10	D	None of these conclusions is guaranteed.
deductive-reasoning-s02-q01	B	Owen is not a member of the Cranleigh reading group.
deductive-reasoning-s02-q02	D	No conclusion about overlap is justified.
deductive-reasoning-s02-q03	A	At least one chair in the hall is not stackable.
deductive-reasoning-s02-q04	C	At least one animal in the collection is not a reptile.
deductive-reasoning-s02-q05	B	At least one volunteer does not work the night shift.
deductive-reasoning-s02-q06	D	None of them runs on diesel.
deductive-reasoning-s02-q07	A	At least one cheese on the board carries a red dot.
deductive-reasoning-s02-q08	C	Rowena's form was signed.
deductive-reasoning-s02-q09	B	The two claims cannot both be true.
deductive-reasoning-s02-q10	D	The rear table holds at least two different items.
deductive-reasoning-s03-q01	A	The reception desk was notified in advance.
deductive-reasoning-s03-q02	B	It is not overdue.
deductive-reasoning-s03-q03	A	The temperature did not rise above 8°C overnight.
deductive-reasoning-s03-q04	C	It was loaded onto the Thursday lorry.
deductive-reasoning-s03-q05	B	It is sound: denying the stated result forces denial of the condition.
deductive-reasoning-s03-q06	C	Farrah was required to sign the day book.
deductive-reasoning-s03-q07	D	Its arrival time is not settled by these facts.
deductive-reasoning-s03-q08	A	The rule as given does not settle whether Bertrand progresses.
deductive-reasoning-s03-q09	B	The caretaker unlocks the side door on both days.
deductive-reasoning-s03-q10	D	That claim was not submitted late.
deductive-reasoning-s04-q01	C	The pipes may or may not have frozen.
deductive-reasoning-s04-q02	D	Her arrival time is not determined.
deductive-reasoning-s04-q03	C	It treats one possible cause as the only cause.
deductive-reasoning-s04-q04	A	It treats the stated condition as the only route to the result.

deductive-reasoning-s04-q05	D	The alarm is not armed.
deductive-reasoning-s04-q06	B	"If fewer than five people enrolled, the seminar was cancelled" and "four people enrolled".
deductive-reasoning-s04-q07	C	Its weight cannot be worked out from this.
deductive-reasoning-s04-q08	A	The sensor is not faulty, by denying the stated result.
deductive-reasoning-s04-q09	B	The conclusion does not follow, because the result can arise another way.
deductive-reasoning-s04-q10	D	A northern-depot delivery this month arrived on time.
deductive-reasoning-s05-q01	A	It is free for drop-in use.
deductive-reasoning-s05-q02	D	Whether Suki collected the keys is unsettled.
deductive-reasoning-s05-q03	A	The parcel did not go by courier.
deductive-reasoning-s05-q04	C	Both gates are shut.
deductive-reasoning-s05-q05	B	The invoice was mislaid.
deductive-reasoning-s05-q06	D	The film starts at neither seven nor eight.
deductive-reasoning-s05-q07	A	It is in the storeroom.
deductive-reasoning-s05-q08	C	The code is expired.
deductive-reasoning-s05-q09	B	Yannick did not attend the workshop.
deductive-reasoning-s05-q10	D	The three statements cannot all be true.
deductive-reasoning-s06-q01	B	Priti meets the age requirement, but nothing more is settled.
deductive-reasoning-s06-q02	C	Elsbeth cannot board the ferry.
deductive-reasoning-s06-q03	B	Reaching 40 points is sufficient for a place in the final.
deductive-reasoning-s06-q04	D	Necessary for entry.
deductive-reasoning-s06-q05	A	Nils is not yet a member.
deductive-reasoning-s06-q06	C	The weather is not settled by this.
deductive-reasoning-s06-q07	B	At least one of the two sensors did not trigger.
deductive-reasoning-s06-q08	D	Tomasz meets one condition, but the award is not guaranteed.
deductive-reasoning-s06-q09	A	Beatriz qualifies for the certificate.
deductive-reasoning-s06-q10	C	Ivan will not be admitted unless a second recommendation is obtained.
deductive-reasoning-s07-q01	C	Marco holds a blue badge.
deductive-reasoning-s07-q02	A	If someone borrows equipment, that person is a member.
deductive-reasoning-s07-q03	D	The gate is locked.
deductive-reasoning-s07-q04	B	The pitch was waterlogged.
deductive-reasoning-s07-q05	C	Whether it was complete cannot be worked out.
deductive-reasoning-s07-q06	A	Each child needs some adult present, not necessarily the same adult for all.
deductive-reasoning-s07-q07	C	Each reviewer read at least one chapter.
deductive-reasoning-s07-q08	D	The invoice was approved.
deductive-reasoning-s07-q09	A	The library did not open last Sunday.
deductive-reasoning-s07-q10	B	Nikolai may not enter the marquee.
deductive-reasoning-s08-q01	B	Colette

deductive-reasoning-s08-q02	D	Q is the lightest of the three.
deductive-reasoning-s08-q03	A	The station
deductive-reasoning-s08-q04	C	Quinn
deductive-reasoning-s08-q05	B	The chemist
deductive-reasoning-s08-q06	D	Wen, Tam, Ursula, Vik
deductive-reasoning-s08-q07	B	Green against blue
deductive-reasoning-s08-q08	C	Yellow
deductive-reasoning-s08-q09	A	Sami is older than Petra.
deductive-reasoning-s08-q10	D	Position four
deductive-reasoning-s09-q01	B	Welcome
deductive-reasoning-s09-q02	C	Cocoa
deductive-reasoning-s09-q03	A	Desk two
deductive-reasoning-s09-q04	D	Pia
deductive-reasoning-s09-q05	B	Biology
deductive-reasoning-s09-q06	C	The vase
deductive-reasoning-s09-q07	B	Flat three
deductive-reasoning-s09-q08	C	The saw
deductive-reasoning-s09-q09	A	Wes
deductive-reasoning-s09-q10	D	Nantes in April
deductive-reasoning-s10-q01	A	The production line stopped.
deductive-reasoning-s10-q02	C	Sanjay's form was not incomplete.
deductive-reasoning-s10-q03	D	Neither the grant decision nor the survey start is settled.
deductive-reasoning-s10-q04	B	The reasoning holds, even though one statement is untrue.
deductive-reasoning-s10-q05	A	It is invalid.
deductive-reasoning-s10-q06	D	The tap was not left running.
deductive-reasoning-s10-q07	D	If A then D.
deductive-reasoning-s10-q08	B	The coach did not run, and the ferry was not cancelled.
deductive-reasoning-s10-q09	A	Nothing. A true conclusion can sit on top of faulty reasoning.
deductive-reasoning-s10-q10	C	The kiln is not on.

Worked explanations

deductive-reasoning-s01-q01: A statement about every member of a group applies to each individual member. Membership in the group plus the universal rule settles the case immediately.

deductive-reasoning-s01-q02: Two universal statements link end to end: everything in the first group belongs to the second, and everything in the second has the sticker. Follow the chain in the direction it is stated.

deductive-reasoning-s01-q03: The statement says where the top-shelf novels sit in the wider category of hardbacks, not that the category holds nothing else. Reversing a universal statement like this is the classic converse error.

deductive-reasoning-s01-q04: Two groups sharing a feature need not overlap each other. A shared middle term establishes no direct link between the groups on either side of it.

deductive-reasoning-s01-q05: The second statement tells you that tray 4 holds packet R seeds and nothing else, so the universal claim about packet R covers every seed in the tray.

deductive-reasoning-s01-q06: If every member of a group has a feature, then anything lacking that feature cannot be a member. This backwards form of a universal statement is always available to you.

deductive-reasoning-s01-q07: A recipe in both chapters would have to use butter and not use butter at once. Since that is impossible, the two chapters can share no recipe.

deductive-reasoning-s01-q08: A universal rule only reaches an individual once that individual is placed inside the group. The missing statement is the one that puts Ivo in the group the rule describes.

deductive-reasoning-s01-q09: "All" distributes across every member of the group without exception, so the count simply tells you how many individual cases the rule covers.

deductive-reasoning-s01-q10: The chain runs one way: quartet membership leads to a stringed instrument, which leads to a locker. Arriving at the end of a chain never lets you travel back up it.

deductive-reasoning-s02-q01: A "no" statement excludes a feature from an entire group, so anyone who has that feature must sit outside the group.

deductive-reasoning-s02-q02: Two "some" statements about the same collection may describe the very same boxes or entirely separate ones. Neither overlap nor separation can be established from them alone.

deductive-reasoning-s02-q03: Denying a universal claim needs only a single exception. "Not all" is therefore much weaker than "none", and says nothing about how many chairs stack.

deductive-reasoning-s02-q04: The collection definitely contains nocturnal animals, and no reptile there is nocturnal, so those particular animals must fall outside the reptile group.

deductive-reasoning-s02-q05: The first-aid trained volunteers definitely exist, and the second statement rules every first-aid trained person out of the night shift, so those volunteers are excluded from it too.

deductive-reasoning-s02-q06: The airport vans sit wholly inside the fleet, so an exclusion that applies to the whole fleet applies to them. What they do run on is never stated.

deductive-reasoning-s02-q07: A "some" statement guarantees that at least one such cheese exists, and the universal rule then applies to it. The conclusion inherits the weaker quantifier of the two.

deductive-reasoning-s02-q08: Since being unsigned and being filed never occur together, a filed form cannot be an unsigned one. Identifying the excluded combination is the whole of the work here.

deductive-reasoning-s02-q09: A universal claim and the statement that it has an exception are direct contradictories: exactly one of them holds, whichever way the shelf actually looks.

deductive-reasoning-s02-q10: The exclusion means no single item can be both a sample and for sale, so the two groups described on that table must be made up of different items.

deductive-reasoning-s03-q01: When the condition of an if-then statement is confirmed, its result follows immediately. This is the most direct use a conditional has.

deductive-reasoning-s03-q02: If the condition would guarantee the result, then the absence of the result rules the condition out. Ruling out backwards is always valid; confirming backwards is not.

deductive-reasoning-s03-q03: Take the statement as given: a rise above the threshold would have produced an alert, so no alert means no such rise. How far below the threshold it stayed is never stated.

deductive-reasoning-s03-q04: The condition is satisfied, so the stated result follows. Note also that the conditional describes a rule, not a cause running the other way.

deductive-reasoning-s03-q05: Once the conditional is granted, an absent result leaves no room for the condition to hold. Doubts about the equipment would question a premise rather than the reasoning built on it.

deductive-reasoning-s03-q06: The condition of the rule was met, so its requirement applies to her. A rule tells you what is required, not whether the requirement was actually met.

deductive-reasoning-s03-q07: The statement gives one route to the one o'clock opening, not the only route. Working backwards from a result to its stated condition is not a valid move.

deductive-reasoning-s03-q08: The rule states what a high score guarantees, not what a lower score rules out. Other routes to an interview are neither offered nor excluded.

deductive-reasoning-s03-q09: A conditional applies afresh to every occasion on which its condition holds, so two bookings produce two unlockings.

deductive-reasoning-s03-q10: No case number means no panel review, and no panel review means the claim was not late. A denial travels backwards along a chain of conditionals one link at a time.

deductive-reasoning-s04-q01: The statement names one thing that produces a pressure drop; it does not claim to name them all. Observing the result leaves the condition genuinely open.

deductive-reasoning-s04-q02: A conditional promises what happens when its condition holds and says nothing about when it fails. She might have arrived early by some other route.

deductive-reasoning-s04-q03: The premise rules out a jam without a stall, but permits a stall without a jam. Naming the other possible explanations is the quickest way to expose this pattern.

deductive-reasoning-s04-q04: Removing the condition removes only the guarantee, not the possibility. Other flowerless plants could exist without contradicting anything given.

deductive-reasoning-s04-q05: This is the one backwards move that does work: an arming would have produced the light, so a missing light rules the arming out.

deductive-reasoning-s04-q06: Only a pair that confirms the condition of a conditional delivers its result. Pairs that confirm or deny the result lead either nowhere or to the opposite conclusion.

deductive-reasoning-s04-q07: The rule obliges heavy lorries to use the bypass but does not forbid lighter ones from using it, so the route taken reveals nothing about the weight.

deductive-reasoning-s04-q08: The absent result is what does the work here: a fault would have produced drift, so steadiness excludes the fault. Naming the pattern helps you reuse it.

deductive-reasoning-s04-q09: A second route to the same result leaves the original statement intact while destroying the backwards inference. Looking for an alternative route is the standard test for this trap.

deductive-reasoning-s04-q10: To attack an inference rather than a premise, look for a case where the premise still holds but the conclusion fails: here, a punctual northern delivery.

deductive-reasoning-s05-q01: When at least one of two alternatives must hold and one is ruled out, the other is left standing.

deductive-reasoning-s05-q02: Confirming one branch of an inclusive alternative tells you nothing about the other. Only ruling a branch out is informative.

deductive-reasoning-s05-q03: "Exactly one" makes the alternatives exclusive, so confirming either branch rules the other out, which an ordinary "or" would not do.

deductive-reasoning-s05-q04: "Neither" denies both alternatives at once, so it behaves as two separate negative statements joined together.

deductive-reasoning-s05-q05: Eliminating one alternative in a statement that guarantees at least one leaves the remaining alternative established.

deductive-reasoning-s05-q06: To deny that at least one alternative holds, you must deny every alternative. Denying a single branch leaves the original claim perfectly possible.

deductive-reasoning-s05-q07: With the list of possibilities declared complete, striking off all but one leaves that one certain. This is elimination in its plainest form.

deductive-reasoning-s05-q08: Allowing both branches to hold does not weaken elimination: at least one must hold, so ruling one out establishes the other.

deductive-reasoning-s05-q09: The phrase "but not both" makes the options exclusive, so taking one closes off the other.

deductive-reasoning-s05-q10: Eliminating the first branch forces the second, which the reply count then contradicts. When elimination leads to a clash, the set of statements is inconsistent.

deductive-reasoning-s06-q01: A requirement states what you must have, not what is enough on its own. Meeting it clears one hurdle and leaves any others unmentioned.

deductive-reasoning-s06-q02: A necessary condition works powerfully in the negative direction: without it, the outcome is ruled out entirely.

deductive-reasoning-s06-q03: A guarantee is a sufficient condition: having it settles the outcome, while other routes to the same outcome remain possible.

deductive-reasoning-s06-q04: "Cannot without" is the standard wording for a requirement. It blocks entry when the card is missing but promises nothing when the card is present.

deductive-reasoning-s06-q05: When several conditions are all required, failing any one of them blocks the outcome, however many of the others are satisfied.

deductive-reasoning-s06-q06: A sufficient condition guarantees the outcome but does not monopolise it, so seeing the outcome leaves that condition open.

deductive-reasoning-s06-q07: Denying a requirement built from two parts denies at least one part, not necessarily both. Take care to keep the conclusion as weak as the evidence.

deductive-reasoning-s06-q08: "Only to" marks a requirement rather than a promise, so satisfying it merely keeps the application alive.

deductive-reasoning-s06-q09: When a condition is stated as the only requirement, it is both necessary and sufficient, so meeting it settles the outcome.

deductive-reasoning-s06-q10: Calling a condition both necessary and sufficient closes off every alternative route: admission happens exactly when the two recommendations are in place.

deductive-reasoning-s07-q01: "Only" introduces a requirement, so the action implies the badge. Reading it as a promise about all badge holders is the usual slip.

deductive-reasoning-s07-q02: An "only" statement flips into if-then form with the borrowing as the condition and the membership as the result, which is the reverse of what the surface wording suggests.

deductive-reasoning-s07-q03: "Unless" names the one stated exception, so with the exception absent the main statement holds.

deductive-reasoning-s07-q04: Read the statement as "if the pitch is not waterlogged, the match goes ahead", then deny the result: the match not going ahead forces the exception to have applied.

deductive-reasoning-s07-q05: The statement means that being forwarded implies being complete, so a completed application might still be held back for some unstated reason.

deductive-reasoning-s07-q06: When "every" comes before "an", each member of the first group gets its own instance of the second. The stronger reading, with one adult shared by all, would need different wording.

deductive-reasoning-s07-q07: The wording lets each reviewer choose a different chapter, so it supports only the per-reviewer reading and leaves whole chapters possibly unread.

deductive-reasoning-s07-q08: "Only if" states a requirement for the payment, so the payment happening means the requirement was met.

deductive-reasoning-s07-q09: "Only when" makes the volunteer a requirement, and a missing requirement rules the opening out.

deductive-reasoning-s07-q10: The first notice makes a ticket necessary and the second makes it sufficient. Lacking the ticket, it is the necessary half that decides the case.

deductive-reasoning-s08-q01: Comparisons of this kind chain together, so ahead-of relations line the three up in a single order with one runner at each end.

deductive-reasoning-s08-q02: Both comparisons point away from the same box, which fixes that box at the bottom while leaving the other two unranked against each other.

deductive-reasoning-s08-q03: Sketch the three positions on one line from the statements; the place that nothing lies south of sits at the southern end.

deductive-reasoning-s08-q04: Assemble the statements into one chain running from the shortest upwards; the person nobody is said to exceed stands at the top.

deductive-reasoning-s08-q05: "Immediately to the left" fixes exact neighbours, so the four shops fall into one fixed arrangement that can simply be read off.

deductive-reasoning-s08-q06: Each statement adds one link, and here the links join into a single unbroken chain from the highest scorer down to the lowest.

deductive-reasoning-s08-q07: Two items can be compared only when a path of statements runs between them. Here one pair has no such path, because each is linked only downwards to the thinnest folder.

deductive-reasoning-s08-q08: Fill the stack from the fixed ends inwards: the bottom two and the top two positions are all pinned down, so the one remaining parcel takes the only free place.

deductive-reasoning-s08-q09: The chain runs strictly downwards in age, so any claim that reverses the two ends contradicts it. Asking which statement must be false is the mirror of asking which must be true.

deductive-reasoning-s08-q10: The ledger's fixed place and the two left-of statements confine the atlas and diary to positions two to four; the one-book gap then leaves a single arrangement standing.

deductive-reasoning-s09-q01: Once one role is claimed by someone else, the remaining person's exclusion leaves only one role open to them.

deductive-reasoning-s09-q02: Start with the clue that fixes a position outright, then apply the exclusion; the last drink falls into the only place left for it.

deductive-reasoning-s09-q03: The two fixed desks leave only two free, and the neighbour restriction rules one of them out for Lena, which settles the other person by elimination.

deductive-reasoning-s09-q04: When one person is excluded from all but one dish, that dish is theirs, whatever the other clues say.

deductive-reasoning-s09-q05: Two subjects are assigned outright, and the double exclusion pins the third student to the one subject left for them, leaving the last subject for the remaining student.

deductive-reasoning-s09-q06: Test the days the book could take: only one leaves room for the following day's delivery, and the remaining parcel then takes Monday.

deductive-reasoning-s09-q07: Two placements for the middle pair survive the early clues, and the final exclusion knocks one of them out, fixing every flat.

deductive-reasoning-s09-q08: The adjacency clue allows only two orders, and the clue about the last slot rules one of them out.

deductive-reasoning-s09-q09: With both ends fixed, the adjacent pair can occupy the middle three places in two ways, and the restriction on the second place eliminates one of them.

deductive-reasoning-s09-q10: The April traveller cannot be the one going to Malmö, and the clue about May rules out the second possible arrangement, leaving one complete grid.

deductive-reasoning-s10-q01: Confirming the first condition triggers the first result, which is the condition of the second statement, so the chain carries you to its far end.

deductive-reasoning-s10-q02: Work backwards one link at a time: no email means no return, and no return means the form was not incomplete.

deductive-reasoning-s10-q03: Chains transmit confirmation forwards and denial backwards only. Confirming the end of a chain leaves everything earlier in it open.

deductive-reasoning-s10-q04: Validity asks only whether the conclusion would have to follow if the statements were granted. Whether those statements are actually true is a separate question about soundness.

deductive-reasoning-s10-q05: Valid reasoning can never carry you from true premises to a false conclusion, so this combination is itself proof that the reasoning is faulty.

deductive-reasoning-s10-q06: A dry floor rules out the overflow, and no overflow rules out the running tap. Denial travels the length of a chain in the reverse direction.

deductive-reasoning-s10-q07: Linked conditionals combine into a single conditional running from the first condition to the last result. Nothing about which statements actually hold can be drawn from rules alone.

deductive-reasoning-s10-q08: Each backwards step removes one more link: the unfilled car park rules out the coach, and the absent coach rules out the cancellation.

deductive-reasoning-s10-q09: Reasoning is judged by whether the conclusion is forced, not by whether it happens to be correct. A lucky hit leaves the backwards step just as invalid as before.

deductive-reasoning-s10-q10: Starting from the unsigned log sheet, each rule is denied in turn back along the chain, and the last denial reaches the kiln at its head.

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