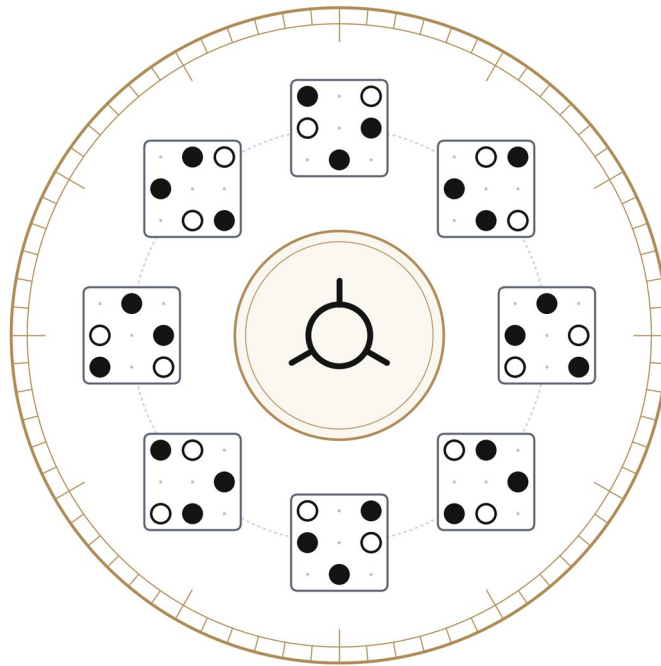


AN EXTREME-RANGE TEST OF FLUID REASONING

PROTEUS

The Abductive–Dynamic Reasoning Test

Form A • Test Booklet



Forty constructed-response items in six sections • untimed • no knowledge required

Test author: Jo Christopher Resquites, MEng

Version 1.1 • October 2026

Scores are reported on a deviation scale ($\sigma = 15$) with a nominal ceiling of 250 — see the PROTEUS Technical Manual.

The Old Man of the Sea

In the oldest tales of the sea, Proteus knew every truth and told none willingly. Seize him and he became a lion; hold on, and he was a serpent, then a leopard, then running water, then a tree in leaf. Only someone who kept hold through every change of shape could make him answer.

PROTEUS asks for that grip.

Why PROTEUS is different

Most intelligence tests show you a fixed pattern and ask you to continue it. Real problems are less polite: the evidence is incomplete, several explanations fit at first, and the rules change without announcing it. PROTEUS is built entirely from such problems. Every item is a small world with hidden laws — laws that may be ambiguous at first, change silently, depend on cues, remember the past, hide part of their machinery, or reappear in a different material. You are asked not only to find a rule, but to notice when it stops working, to let it go, to find its successor, and to carry it somewhere new.

The test is constructed-response throughout: there are no options to choose from, and every one of its forty answers has been proven unique by exhaustive computer search. Its last section, The Frontier, contains problems designed for the farthest reaches of the human range — and, its author hopes, a little beyond.

What PROTEUS measures

Abductive-Dynamic Reasoning (ADR), also called rule plasticity: the domain-general ability to infer the best explanatory rule from incomplete, ambiguous or changing novel information; to hold competing hypotheses in mind; to revise them when the evidence turns against them; and to transfer the revised rule to a new context. Each item exercises several of these acts:

- inferring a rule when the evidence is insufficient;
- noticing that the rule has changed;
- inhibiting the old rule;
- generating a new hypothesis;
- testing it against new evidence;
- transferring it to a structurally different problem.

Section V adds causal-interventional reasoning: inferring how a hidden system is wired, and predicting what would happen if something in it were changed.

How to take the test

The worlds

Each item is self-contained. Everything you need is on its page; no knowledge of language, mathematics, science or culture will help you. Each section opens with a short description of its materials, and each item states exactly what you must supply.

The Principle of the Best Explanation

Many accounts may fit part of the evidence. The intended answer always follows from the simplest account that fits ALL of it, judged in this order:

1. it uses the fewest different laws;
2. among those, it needs the fewest unexplained changes of law.

A regularity that governs when or how a law changes — an alternation, a trigger, a signal, a schedule — counts as one law. Nothing else (familiarity, elegance, what usually happens) decides between accounts. Unless an item says otherwise, a law that has changed keeps its new form until the evidence shows another change.

Every answer is unique

Each item has exactly one correct answer under this principle. Every item was verified by a computer program that enumerated all rival explanations in a large, explicitly defined family — from a few hundred to nearly a trillion candidates — and confirmed that the simplest explanations all lead to the same answer.

Answering and scoring

Write or draw your answers on the Answer Sheet at the back of this booklet. Every answer is constructed: a drawn panel, strip or colony; a written necklace; a list of placements; a set of lamp states. Every requested part must be correct for the item to score. One point per item, no partial credit; wrong answers cost nothing, so attempt everything. The raw score (0–40) is converted into a deviation IQ ($\sigma = 15$, nominal ceiling 250) with the norm tables of the PROTEUS Technical Manual.

Rules

- There is no time limit. Take weeks if you wish, and return to items with fresh eyes.
- Work entirely alone: no help from other people, forums, published solutions, search engines, AI systems or computer programs of any kind.
- Pencil, paper, ruler and squared paper are allowed, as are simple physical aids such as a small mirror or paper cut-outs.
- **One attempt per person.** Only the first answer sheet you submit is scored, and only first attempts count toward the norms. A revised printing of this booklet is the same test: if you have already submitted answers to any version of Form A, do not take it again.
- **Not a retest:** re-sending an unreadable or incomplete scan, a rescore when you show another valid answer, or a clerical correction.
- **The retest is Form B.** PROTEUS Form B is sent by email on request at least six months after your Form A was scored, and is reported as a separate score.
- Do not share the items or your answers with anyone.
- When you have finished, complete the declaration on the Answer Sheet and email it, with proof of payment of the scoring fee, to the test author at jresquites@mensaphilippines.org.

Notation

Symbol	Meaning
● ○ on a lattice	A black / white token in a socket. A small gray dot marks an empty socket.
■ □	A black / white cell of a strip. The two ends of every strip are joined: the first and last cells are neighbors.
● ○ ● in a necklace	Three kinds of bead, written from left to right.
t = 0, 1, 2 ...	Successive moments. Each row is produced from the row(s) above it.
K1 K2 K3 K4	The four key cards: one black circle; two white triangles; three gray squares; four striped stars.
✓ ✗	The oracle's verdict on a placement: right / wrong.
● ○ on a lamp board	Lamp lit / dark. A shaded square behind a lamp means the experimenter held it in that state.
Arrows between lamps	Wiring diagrams (Section IV): an arrow $X \rightarrow Y$ means X is an input of Y; a loop means a lamp is its own input.
Glyphs 1–6	The six symbols of Item 38, referred to by their numbers.
? (dashed frame)	What you must supply.

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Section IV Translations · Cross-system transfer · items 19–24

19. The Current Law · 20. The Turning Necklace · 21. The Component Law · 22. Mutual Translation · 23. The Alien Alignment · 24. The Inverted Dictionary

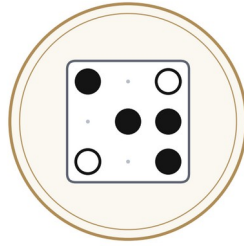
Section V Levers and Lamps · Causal-interventional reasoning · items 25–30

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31. The Ecology of Walls · 32. The Damaged Transmission · 33. The Machine That Remembers · 34. Alien Life · 35. The Unseen Lamp · 36. The Oracle Who Learns · 37. The Composition Engine · 38. The Scribes' Algebra · 39. The Archaeologist · 40. The Migrating Grammar

Answer Sheet · at the back of the booklet



SECTION I

Mutable Matrices

Dynamic matrix reasoning

Rows of panels on a small lattice of sockets (a small gray dot marks an empty socket). Within a row each panel is made from the panel before it - or, where the item says so, from the two panels before it - by a hidden law. The law may change between rows or within a row, it may depend on what the panel itself looks like, and black and white tokens may obey different laws. Draw the missing panel on the blank lattice of the Answer Sheet, marking ● for a black token and ○ for a white token.

Items 1-6

1. The Canceling Veil
2. The Turning Mirror
3. Two Tides
4. The Silent Switchman
5. The Metronome
6. The Turncoat Signal

The Canceling Veil

In each row the third panel is made from the first two. Draw the missing panel.

Row 1

Row 2

Row 3

Row 4

Record your answer on the Answer Sheet.

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The Turning Mirror

Each panel is made from the panel to its left by one hidden transformation. Draw the missing panel.

Row 1

Row 2

Row 3

Row 4

Record your answer on the Answer Sheet.

Two Tides

Each panel is made from the panel to its left. Draw the missing panel.

Row 1			
Row 2			
Row 3			
Row 4			

Record your answer on the Answer Sheet.

The Silent Switchman

Each panel is made from the panel to its left. Draw the missing panel.

Row 1

Row 2

Row 3

Row 4

Record your answer on the Answer Sheet.

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The Metronome

Each panel is made from the panel to its left by a hidden transformation. Draw the missing panel.

Row 1

Row 2

Row 3

Row 4

Record your answer on the Answer Sheet.

The Turncoat Signal

Each panel is made from the panel to its left. Draw the missing panel.

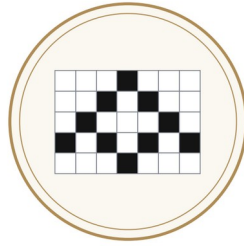
Row 1

Row 2

Row 3

Row 4

Record your answer on the Answer Sheet.



SECTION II

Drifting Strings

Ambiguous and shifting sequences

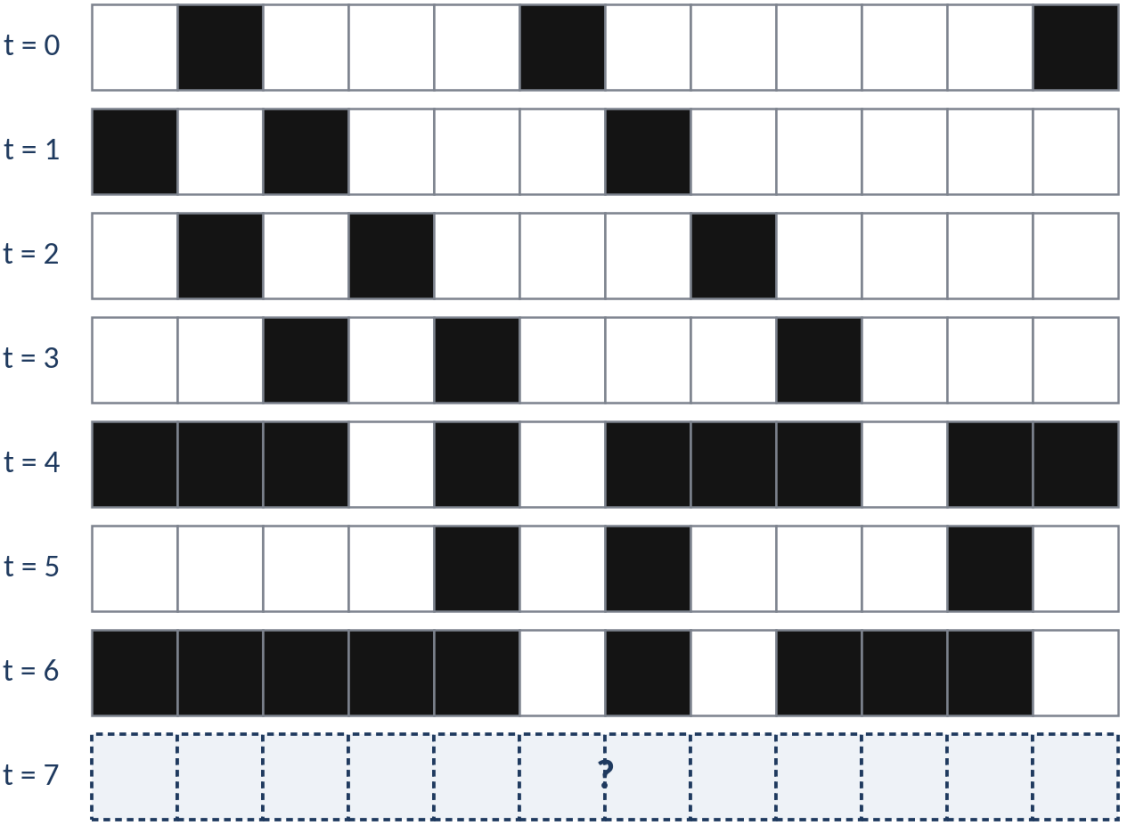
Strips of cells (■ black, □ white) and necklaces of beads (●, ○ and ◎) that move, grow or transform from one moment t to the next. In every strip the two ends are joined: a cell that leaves one end re-enters at the other, and the first and last cells are neighbors. Laws may hold for a while and then change; some laws remember the past. Draw the requested strip on the Answer Sheet, or write the requested necklace bead by bead from left to right.

Items 7–12

- 7. The Eclipse
- 8. The Twin Laws
- 9. The Seed Grammar
- 10. The Mutating Grammar
- 11. The Inchworm
- 12. Two Voices

The Eclipse

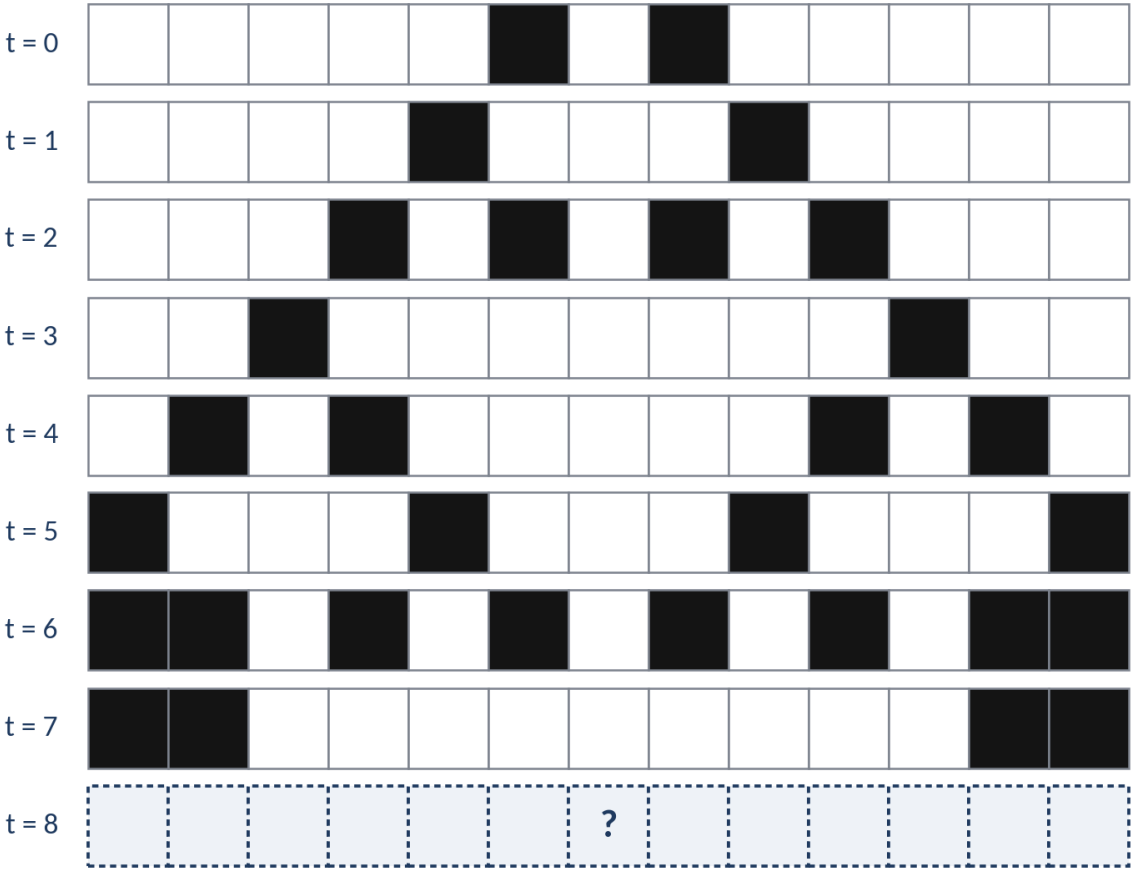
Each strip is made from the strip above it. The two ends of a strip are joined (a cell leaving one end re-enters at the other). Fill in the strip at $t = 7$.



Record your answer on the Answer Sheet.

The Twin Laws

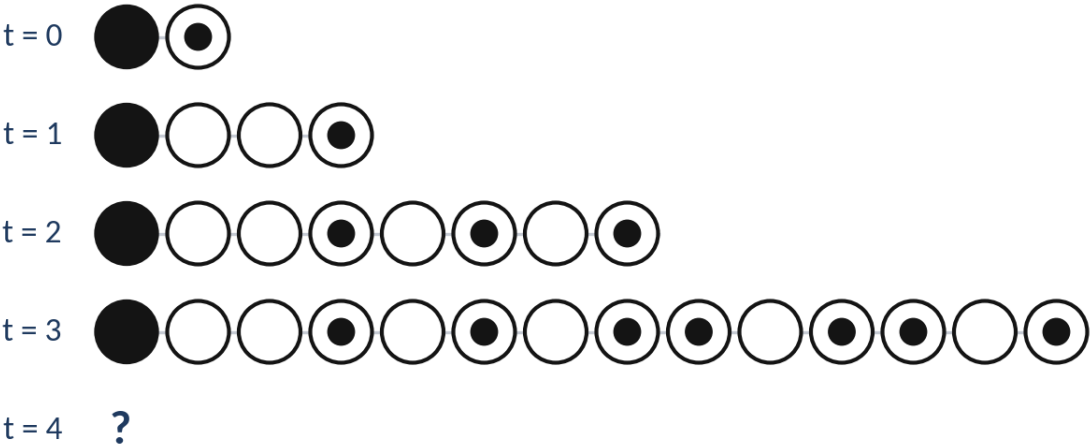
Each strip is made from the strip above it by one fixed local law (the ends are joined). Fill in the strip at $t = 8$.



Record your answer on the Answer Sheet.

The Seed Grammar

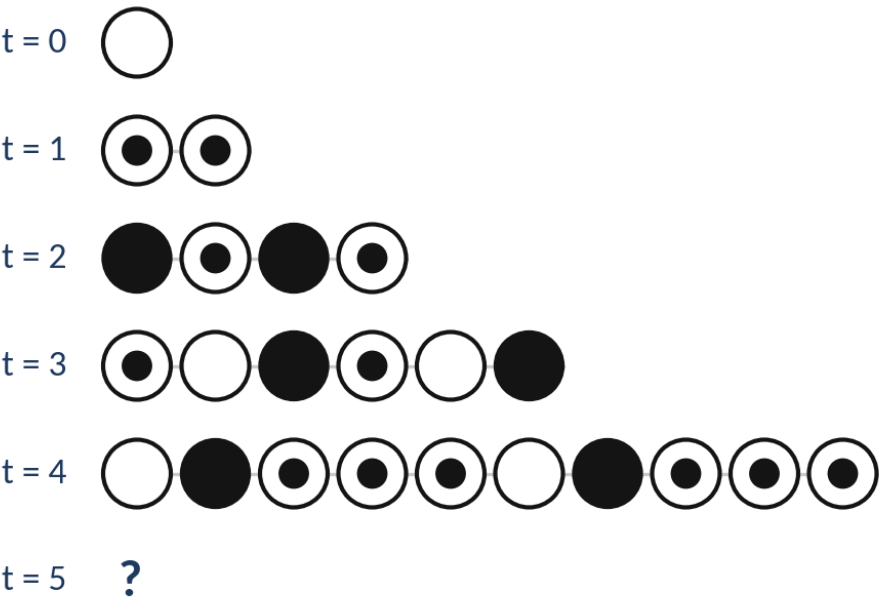
Each necklace grows from the one above it: every bead is replaced, all at once, by its own fixed little string of beads (the same string every time that kind of bead appears). Write the necklace at $t = 4$.



Record your answer on the Answer Sheet.

The Mutating Grammar

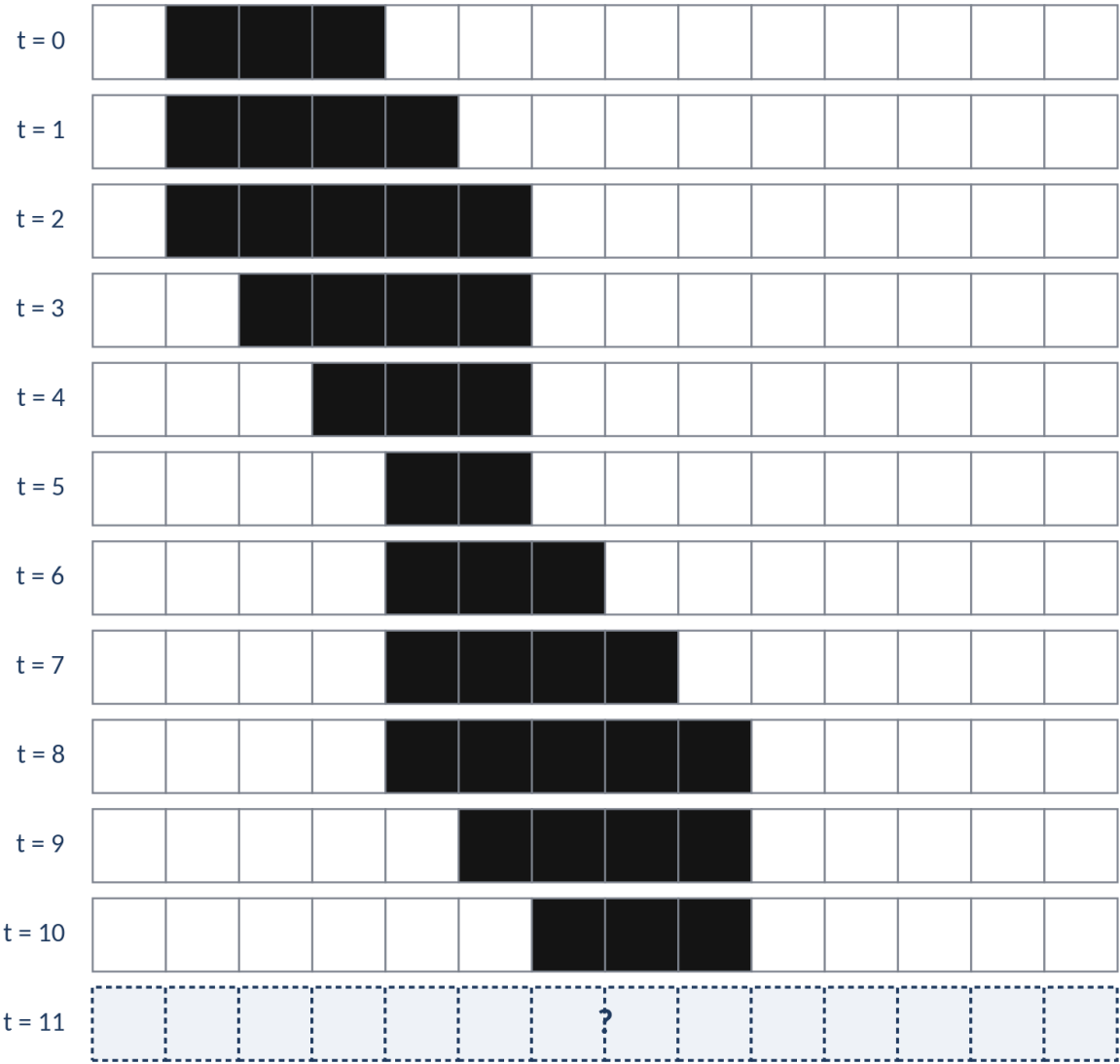
Each necklace is made from the one above it: every bead is replaced, all at once, by a fixed little string of beads for its kind. The replacement strings may change without warning. Write the necklace at $t = 5$.



Record your answer on the Answer Sheet.

The Inchworm

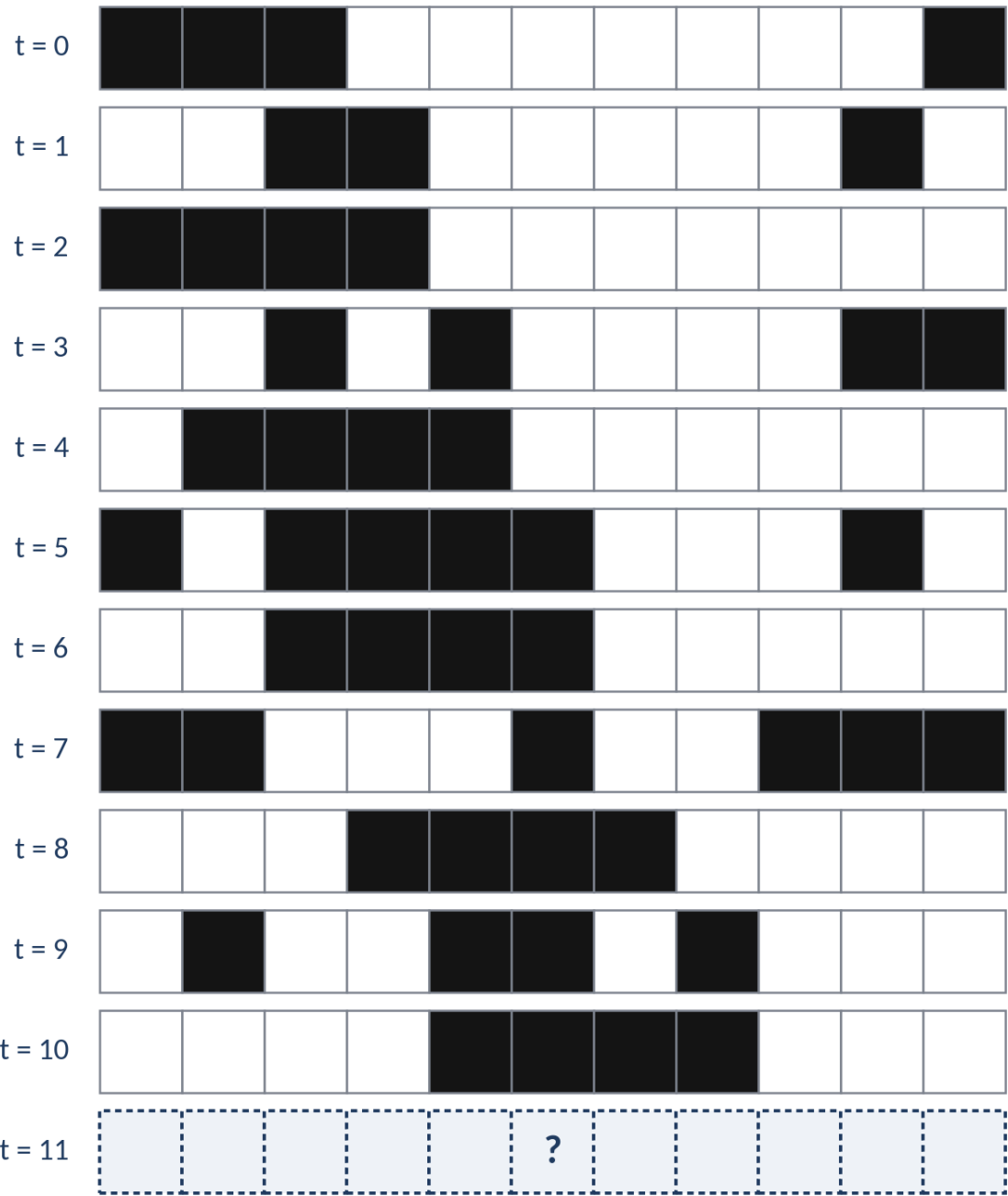
Each strip is made from the strip above it (the ends are joined). Fill in the strip at $t = 11$.



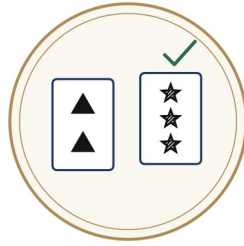
Record your answer on the Answer Sheet.

Two Voices

The strips form one sequence (the ends of each strip are joined). Fill in the strip at $t = 11$.



Record your answer on the Answer Sheet.



SECTION III

The Oracle's Ledger

Hidden-rule feedback

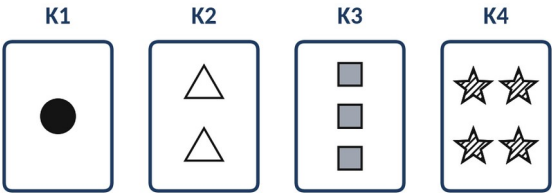
An oracle sorts cards. Each card carries one to four identical symbols - circles, triangles, squares or stars - that are black, white, gray or striped. A player placed each card under one of four key cards (K1-K4) and the oracle answered ✓ (right) or ✗ (wrong). The player is only guessing; the oracle alone knows the law, and the law may change. One item shows a line of accepted and rejected cards instead. Give the placements the oracle would approve.

Items 13-18

- 13. The Oracle Changes Its Mind
- 14. The Line of Assent
- 15. Two Masters
- 16. The Returning Law
- 17. The Crooked Oracle
- 18. The Restless Oracle

The Oracle Changes Its Mind

Where must the oracle's next three cards (trials 19-21) be placed?

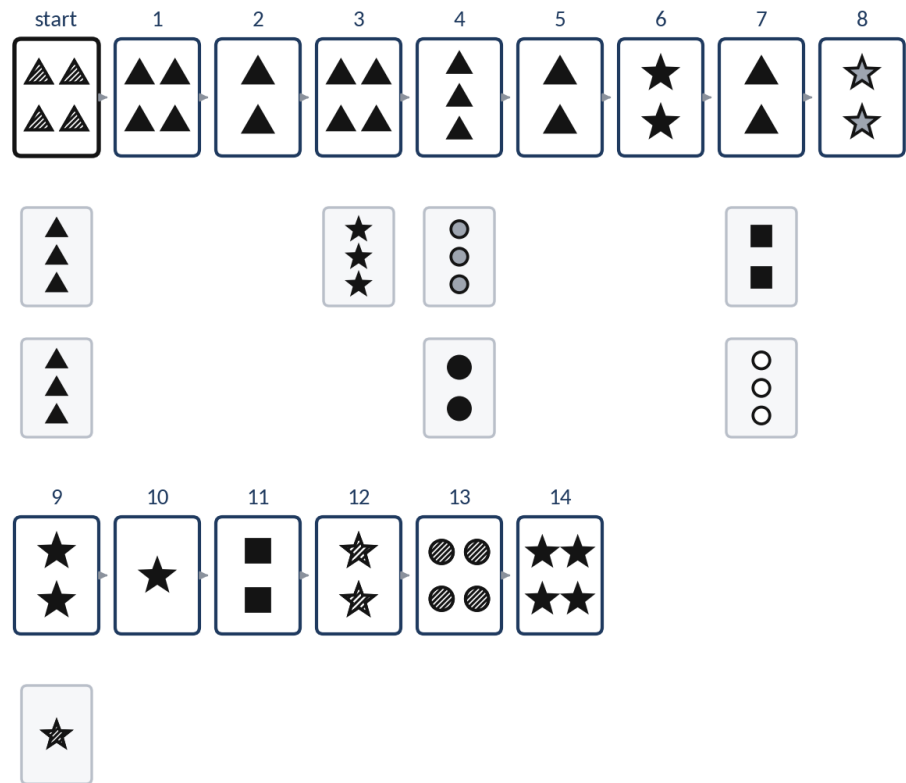


Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K1	✗	12		K4	✓
2		K1	✗	13		K1	✓
3		K2	✗	14		K3	✓
4		K4	✗	15		K3	✓
5		K4	✗	16		K2	✓
6		K3	✗	17		K3	✓
7		K2	✓	18		K4	✓
8		K2	✓	19		?	
9		K4	✗	20		?	
10		K1	✓	21		?	
11		K1	✓				

Record your answer on the Answer Sheet.

The Line of Assent

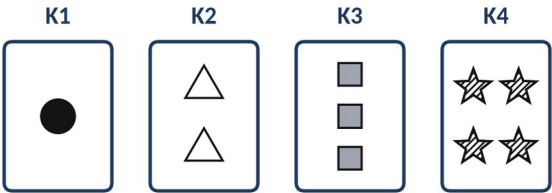
Cards are played one after another. A card is accepted (it joins the line) or rejected (it is laid below the line, under the last accepted card) by a hidden law that compares it with the LAST ACCEPTED card. The law may change. Which of the cards A-F would be accepted if played next? (Give every acceptable letter.)



Record your answer on the Answer Sheet.

Two Masters

Where must the oracle's next four cards (trials 19-22) be placed?

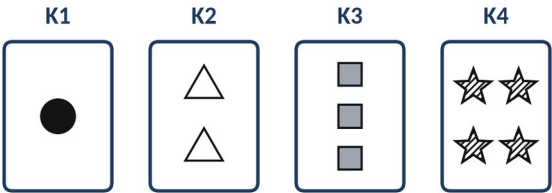


Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K1	✗	12		K2	✓
2		K3	✓	13		K3	✓
3		K1	✗	14		K3	✗
4		K2	✓	15		K2	✓
5		K2	✓	16		K4	✗
6		K4	✓	17		K2	✓
7		K3	✓	18		K1	✗
8		K4	✓	19		?	
9		K2	✗	20		?	
10		K2	✓	21		?	
11		K1	✓	22		?	

Record your answer on the Answer Sheet.

The Returning Law

Where must the oracle's next three cards (trials 20-22) be placed?

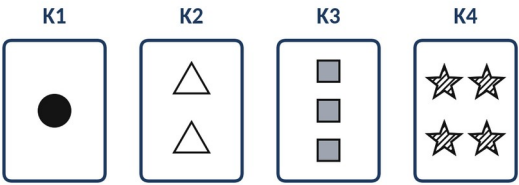


Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K2	✓	12		K2	✓
2		K2	✗	13		K3	✓
3		K1	✗	14		K2	✓
4		K2	✓	15		K3	✗
5		K4	✗	16		K2	✓
6		K2	✗	17		K4	✓
7		K2	✗	18		K2	✓
8		K3	✓	19		K2	✗
9		K3	✓	20		?	
10		K1	✓	21		?	
11		K4	✓	22		?	

Record your answer on the Answer Sheet.

The Crooked Oracle

Where must the oracle's next three cards (trials 21-23) be placed?

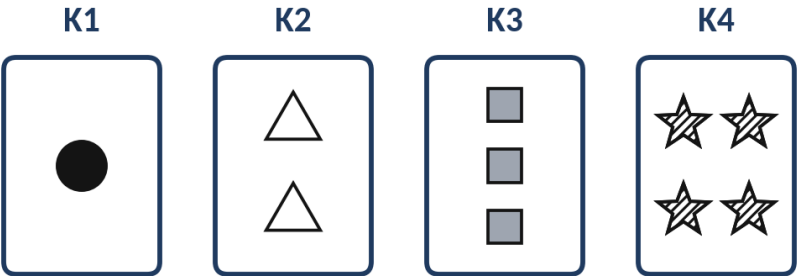


Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K2	✗	13		K4	✓
2		K2	✗	14		K3	✓
3		K2	✗	15		K3	✗
4		K2	✗	16		K3	✗
5		K2	✗	17		K4	✓
6		K2	✓	18		K2	✓
7		K3	✓	19		K2	✗
8		K4	✓	20		K1	✓
9		K1	✓	21		?	
10		K1	✓	22		?	
11		K4	✗	23		?	
12		K3	✓				

Record your answer on the Answer Sheet.

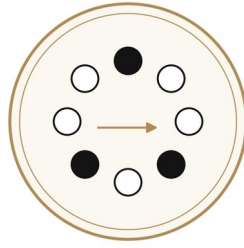
The Restless Oracle

From trial 25 on, the player places every card correctly. Where must the cards of trials 25-28 be placed?



Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K4	✓	11		K4	✗	21		K2	✓
2		K2	✓	12		K1	✗	22		K2	✗
3		K4	✓	13		K2	✗	23		K3	✗
4		K3	✗	14		K1	✗	24		K4	✓
5		K1	✓	15		K4	✗	25		?	
6		K3	✓	16		K3	✓	26		?	
7		K4	✓	17		K4	✓	27		?	
8		K3	✗	18		K4	✗	28		?	
9		K2	✗	19		K3	✓				
10		K1	✗	20		K4	✓				

Record your answer on the Answer Sheet.



SECTION IV

Translations

Cross-system transfer

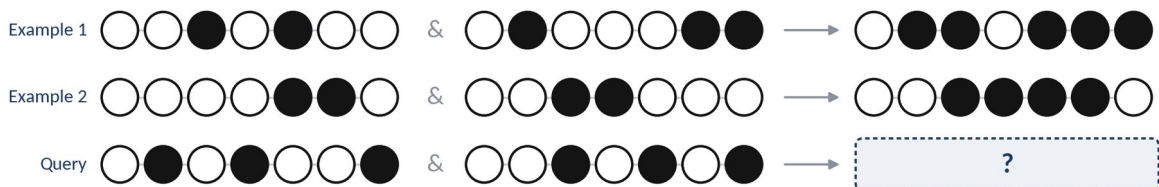
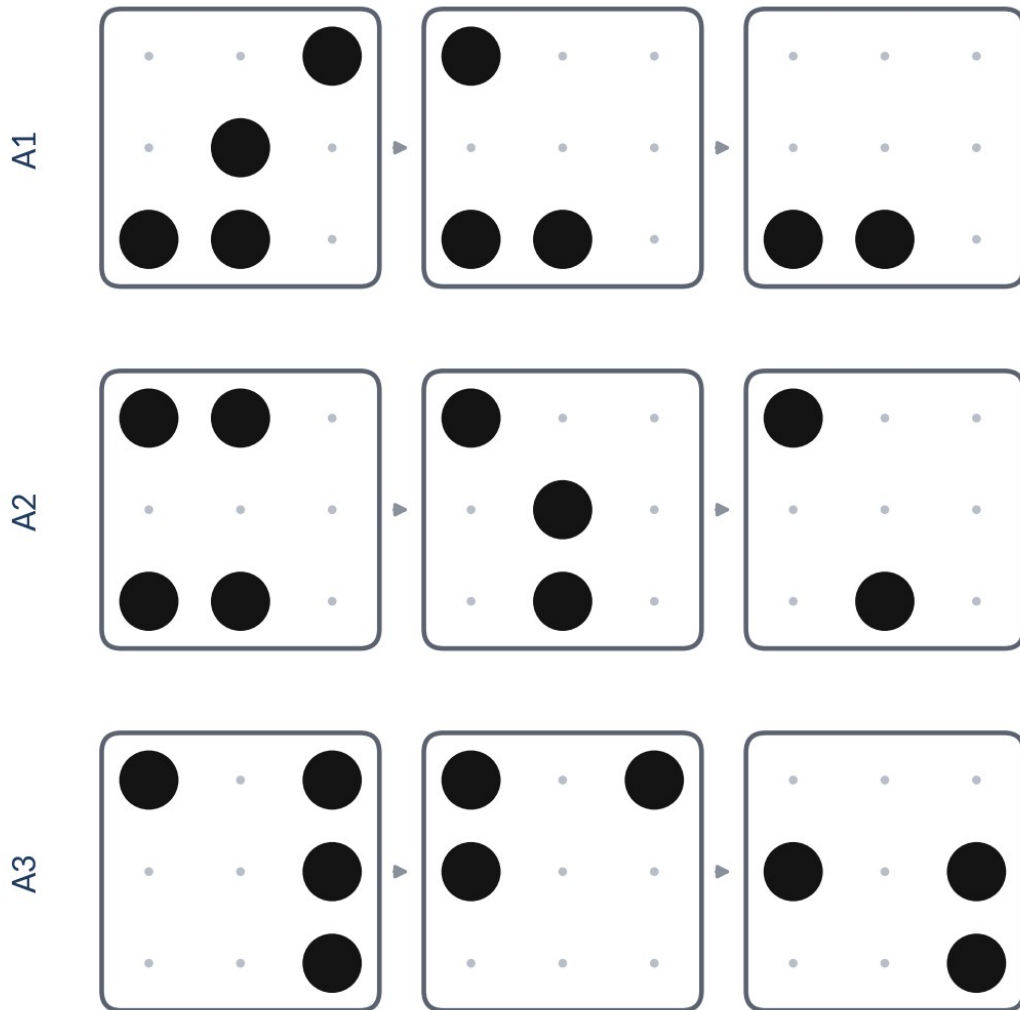
Two machines obey one and the same hidden law, expressed in different materials - lattices, necklaces, rings, strips, columns, lamp boards. One machine teaches the law (sometimes after changing it); the other must be predicted, although its own examples are not enough on their own. Find the law, find how it translates into the second material, and apply it.

Items 19-24

- 19. The Current Law
- 20. The Turning Necklace
- 21. The Component Law
- 22. Mutual Translation
- 23. The Alien Alignment
- 24. The Inverted Dictionary

The Current Law

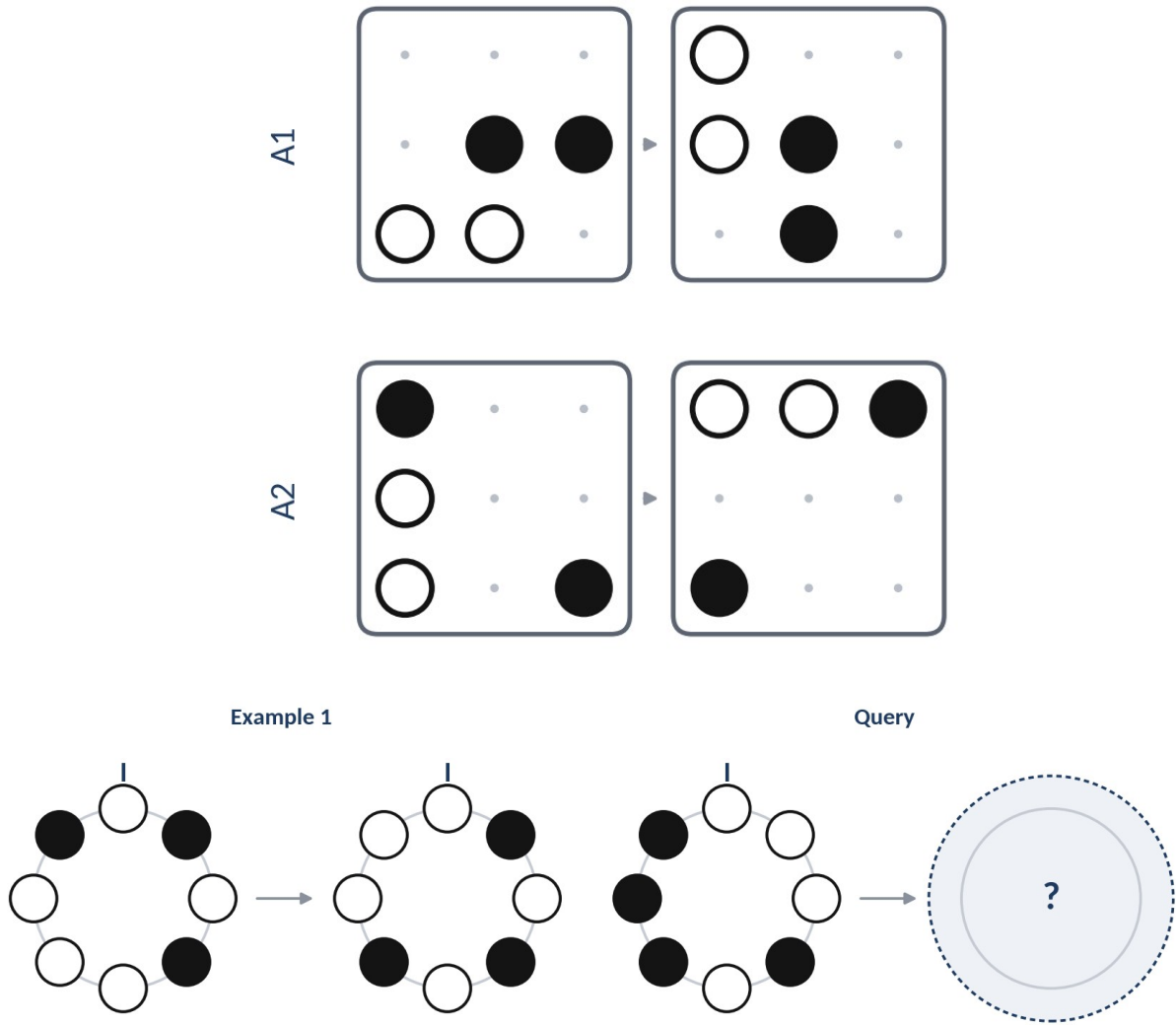
Machine A (lattices) and Machine B (necklaces) always obey the same law of combination, but each rewrites it for its own material. Machine A's three runs are shown in the order they happened; B's runs happened after A's last run. What does Machine B produce for the query pair?



Record your answer on the Answer Sheet.

The Turning Necklace

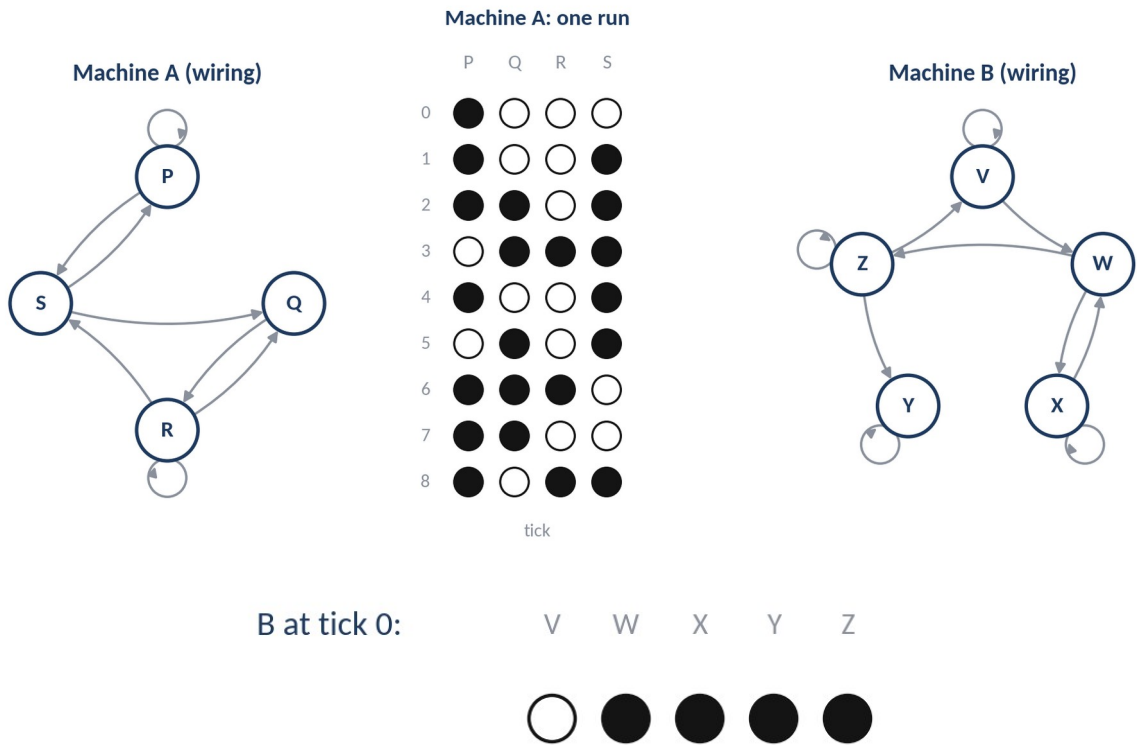
Machine A acts on lattices, Machine B on rings of eight beads (read clockwise from the top mark). Both perform the same motion. Draw the ring Machine B makes from the query ring.



Record your answer on the Answer Sheet.

The Component Law

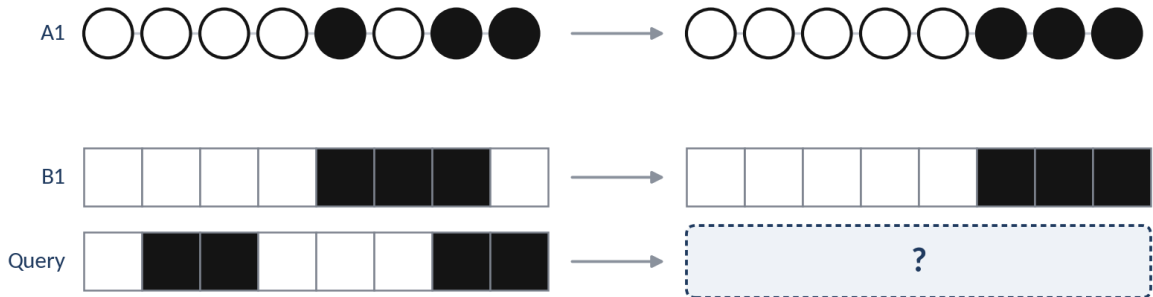
Each lamp has exactly two input wires (arrows into it; a loop means the lamp is one of its own inputs). Every lamp in both machines obeys one common law that treats its two inputs alike: a lamp's state at the next tick depends only on how many of its two inputs are lit now. The law may have changed while Machine A was running; Machine B was built afterward with the components as they were at the end of A's run. Starting B as shown, give the state of V, W, X, Y, Z at tick 3.



Record your answer on the Answer Sheet.

Mutual Translation

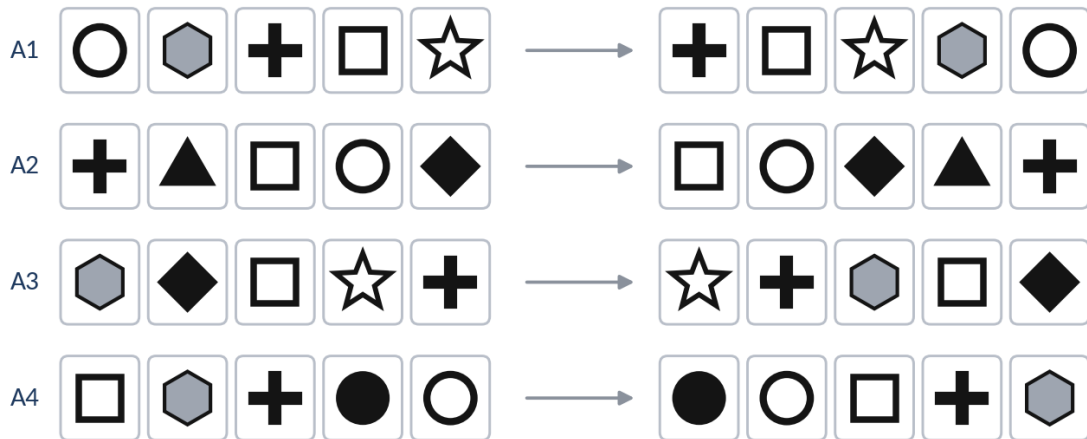
A necklace machine (A) and a strip machine (B) obey the same law (ends joined; B may render colors or direction differently from A). Each machine has been seen working only once. Give B's output for the query strip.



Record your answer on the Answer Sheet.

The Alien Alignment

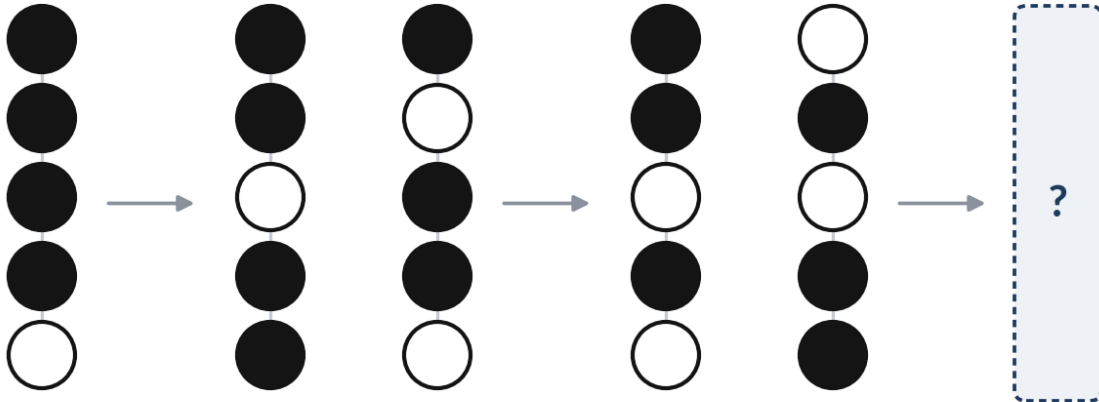
Machine A rearranges rows of five symbols; its runs A1-A4 are in time order. Machine B rearranges columns of five beads and always copies A's CURRENT rearrangement, although nobody told you how B's column lines up with A's row. Give B's output for the query column (top to bottom).



Example 1

Example 2

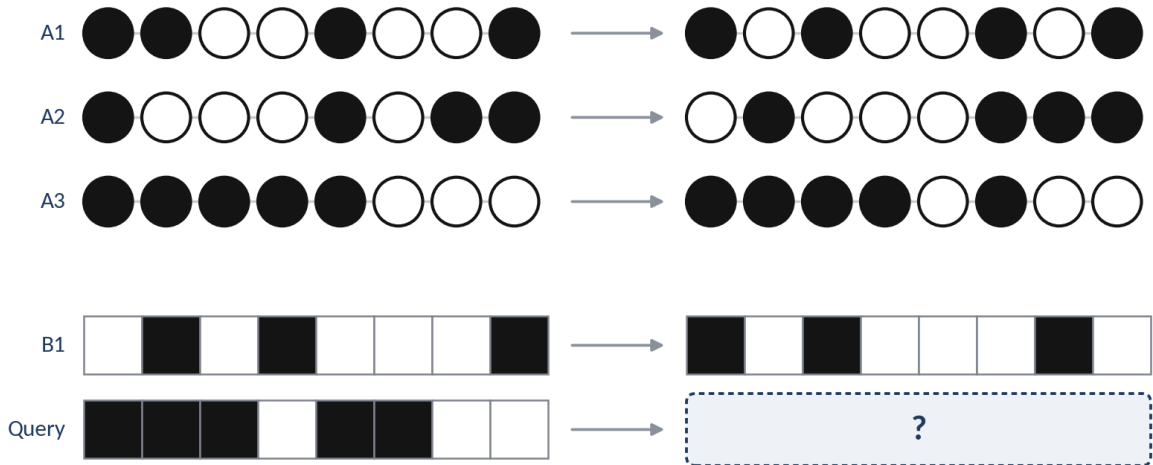
Query



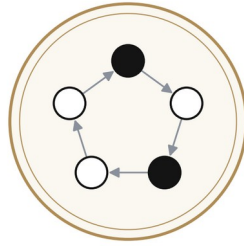
Record your answer on the Answer Sheet.

The Inverted Dictionary

Necklaces (A) and strips (B) obey the same law; in both, the two ends are joined. But Machine B's 'dictionary' is unknown: B may render A's black as white or vice versa, and may read in the opposite direction. Give B's output for the query strip.



Record your answer on the Answer Sheet.



SECTION V

Levers and Lamps

Causal-interventional reasoning

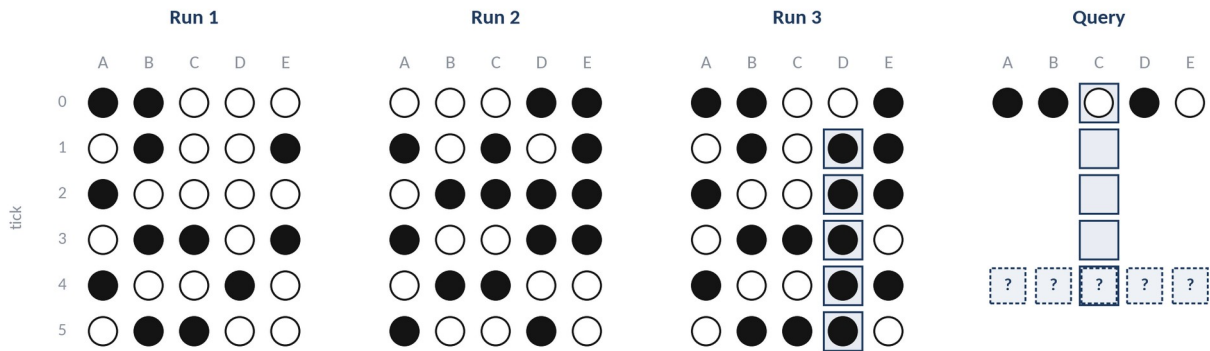
Boards of lamps (● lit, ○ dark) that switch tick by tick. Every lamp follows a fixed law that reads the states of at most two lamps - possibly itself - at the previous tick. An experimenter may hold a lamp ON or OFF (shaded squares); a held lamp ignores its law. From the recorded runs, work out how the board is wired; then predict what an intervention, a counterfactual or a broken wire would do. Give lamp states as ● and ○.

Items 25-30

- 25. The Relay
- 26. The Gatekeeper
- 27. The Twins
- 28. The Broken Wire
- 29. The Helmsman
- 30. The Echo That Never Was

The Relay

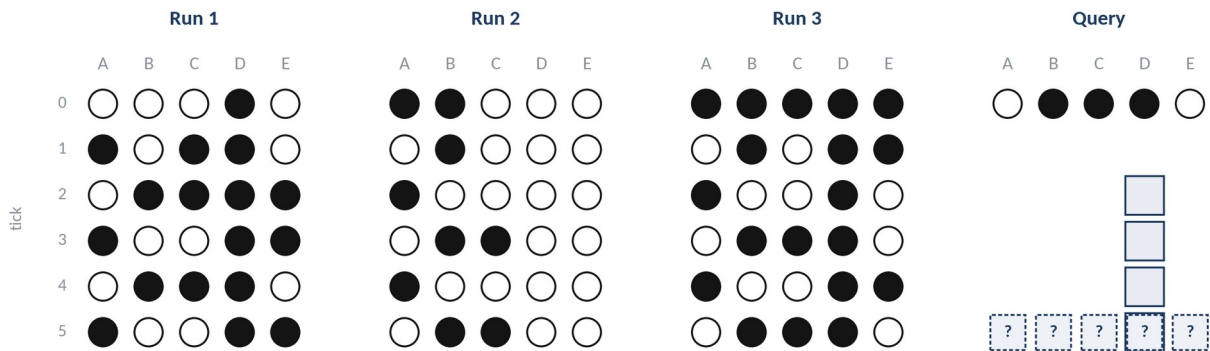
Five lamps A-E are wired together. Runs 1-3 show what happened from various starting states (in Run 3 lamp D was held ON from tick 1). In the Query run the lamps start as shown and lamp C is held OFF from tick 0. Give the state of all five lamps at tick 4.



Record your answer on the Answer Sheet.

The Gatekeeper

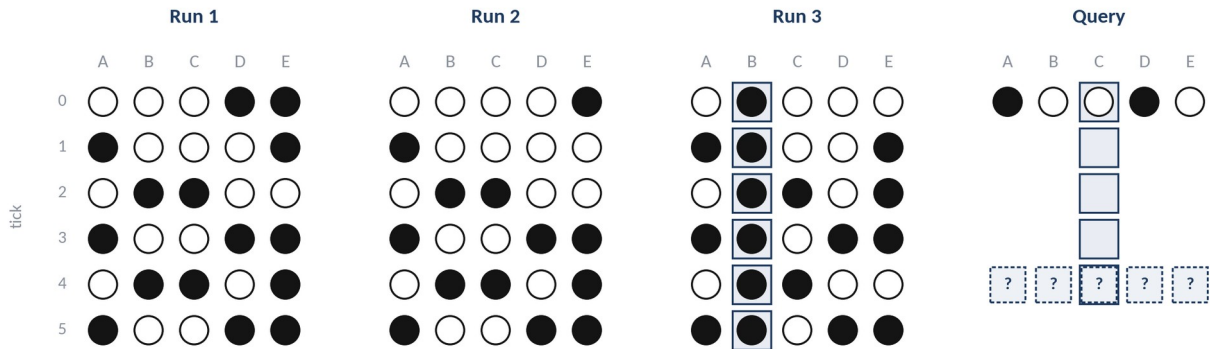
In the Query run the lamps start as shown, and lamp D is held OFF from tick 2 onward. Give the state of all five lamps at tick 5.



Record your answer on the Answer Sheet.

The Twins

In the undisturbed runs, lamps B and C always agree. In Run 3 lamp B was held ON from tick 0. In the Query run lamp C is held OFF from tick 0. Give the state of all five lamps at tick 4.



Record your answer on the Answer Sheet.

The Broken Wire

During one of these runs a single wire broke and stayed broken. Run 3 is continued beyond tick 7: from tick 8 lamp D is held OFF. Give the state of all five lamps at tick 9.

Run 1						Run 2						Run 3					
tick	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E		
	0	☐	☒	☒	☒	☐	☐	☒	☐	☒	☒	☐	☐	☐	☐		
	1	☒	☐	☒	☒	☒	☐	☐	☐	☐	☒	☐	☐	☐	☐		
	2	☐	☒	☒	☒	☒	☐	☒	☐	☐	☐	☒	☐	☒	☐		
	3	☒	☐	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐	☒		
	4	☐	☒	☒	☒	☒	☐	☒	☐	☐	☒	☒	☐	☐	☐		
	5	☒	☐	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		
	6	☐	☒	☒	☒	☒	☐	☒	☐	☐	☒	☐	☐	☐	☐		
	7	☒	☐	☒	☒	☒	☒	☐	☐	☐	☐	☐	☒	☐	☐		

Record your answer on the Answer Sheet.

The Helmsman

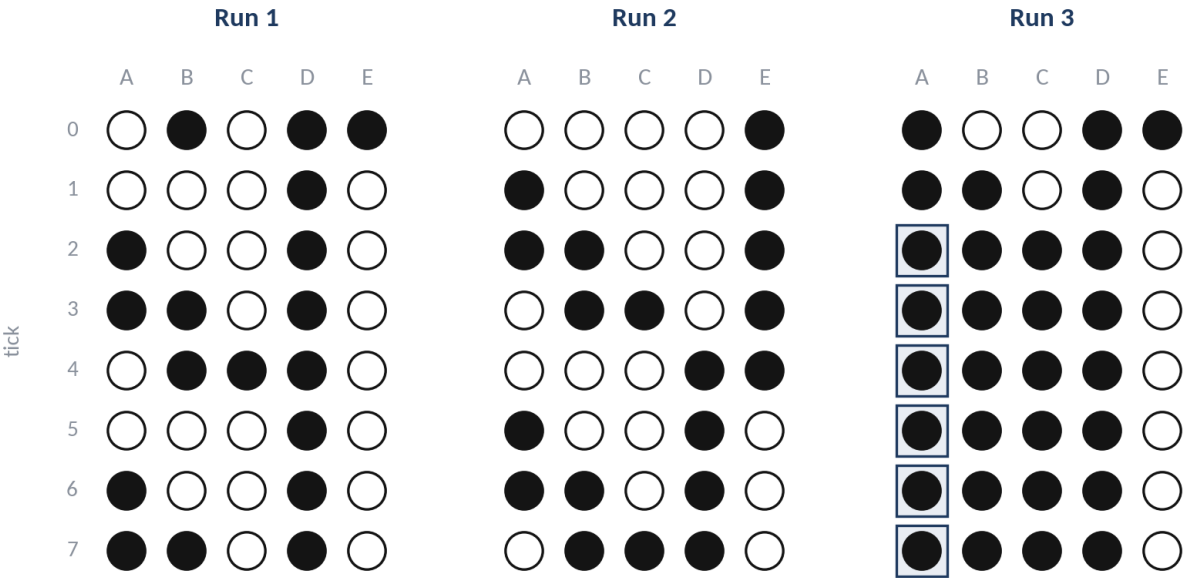
You may hold exactly one of the lamps A, B, C or D, ON or OFF, from tick 0 for ever. List EVERY such single hold that makes lamp E lit at every tick from tick 3 onward, whatever state the lamps start in.

Run 1						Run 2						Run 3					
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E		
0	☐	☒	☒	☒	☒	☒	☐	☒	☒	☒	☒	☒	☐	☒	☒		
1	☒	☒	☒	☒	☒	☐	☐	☐	☐	☒	☐	☒	☒	☐	☐		
2	☐	☐	☒	☐	☒	☒	☒	☐	☒	☐	☒	☒	☒	☒	☐		
3	☒	☒	☐	☒	☐	☐	☐	☒	☐	☐	☐	☒	☒	☐	☒		
4	☐	☐	☒	☐	☐	☒	☒	☐	☒	☐	☒	☒	☒	☒	☐		
5	☒	☒	☐	☒	☐	☐	☐	☒	☐	☐	☐	☒	☒	☐	☒		

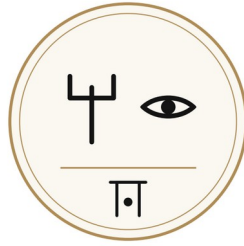
Record your answer on the Answer Sheet.

The Echo That Never Was

Look at Run 2. Suppose everything had been exactly the same, except that lamp B had been held OFF from tick 1 onward. What would all five lamps have shown at tick 6?



Record your answer on the Answer Sheet.



SECTION VI

The Frontier

Integrated extreme abduction

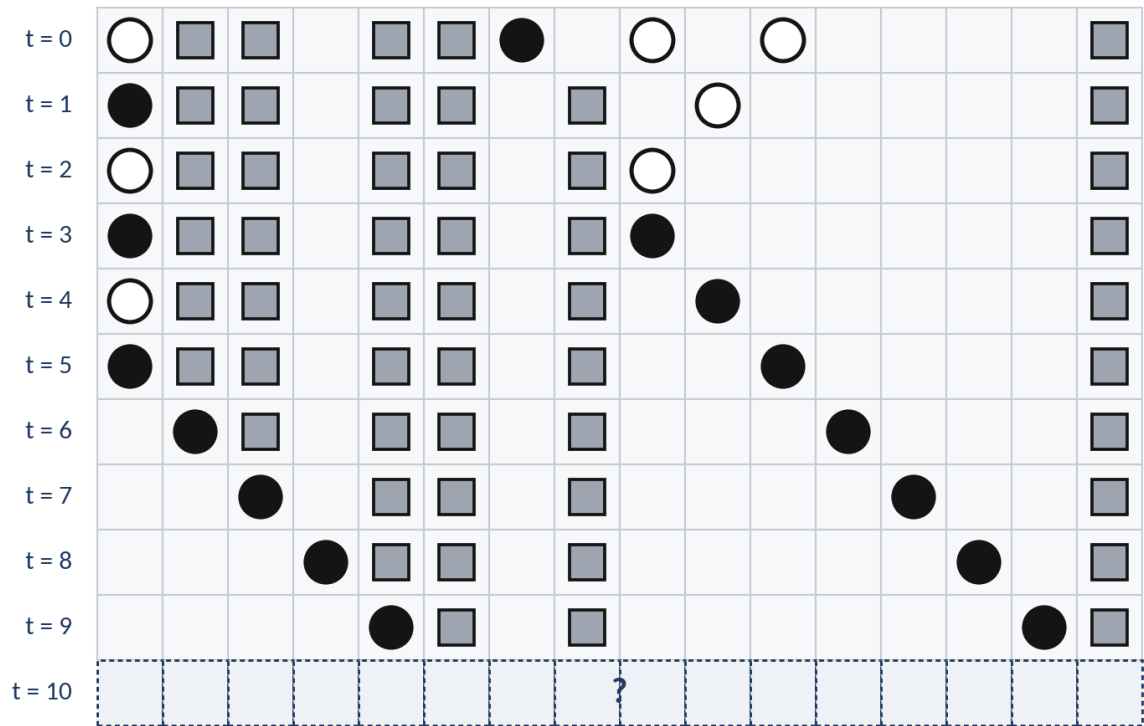
Ten artifacts from stranger worlds: an algebra copied by scribes who changed their style, a colony on a doughnut-shaped surface, a machine with memory, a board with a lamp you cannot see, a damaged record, a grammar whose rules migrate. They combine everything the earlier sections asked for and then go further. Several are meant to resist even the most exceptional solvers - yet every one of them has exactly one answer, proven by exhaustive search.

Items 31-40

- 31. The Ecology of Walls
- 32. The Damaged Transmission
- 33. The Machine That Remembers
- 34. Alien Life
- 35. The Unseen Lamp
- 36. The Oracle Who Learns
- 37. The Composition Engine
- 38. The Scribes' Algebra
- 39. The Archaeologist
- 40. The Migrating Grammar

The Ecology of Walls

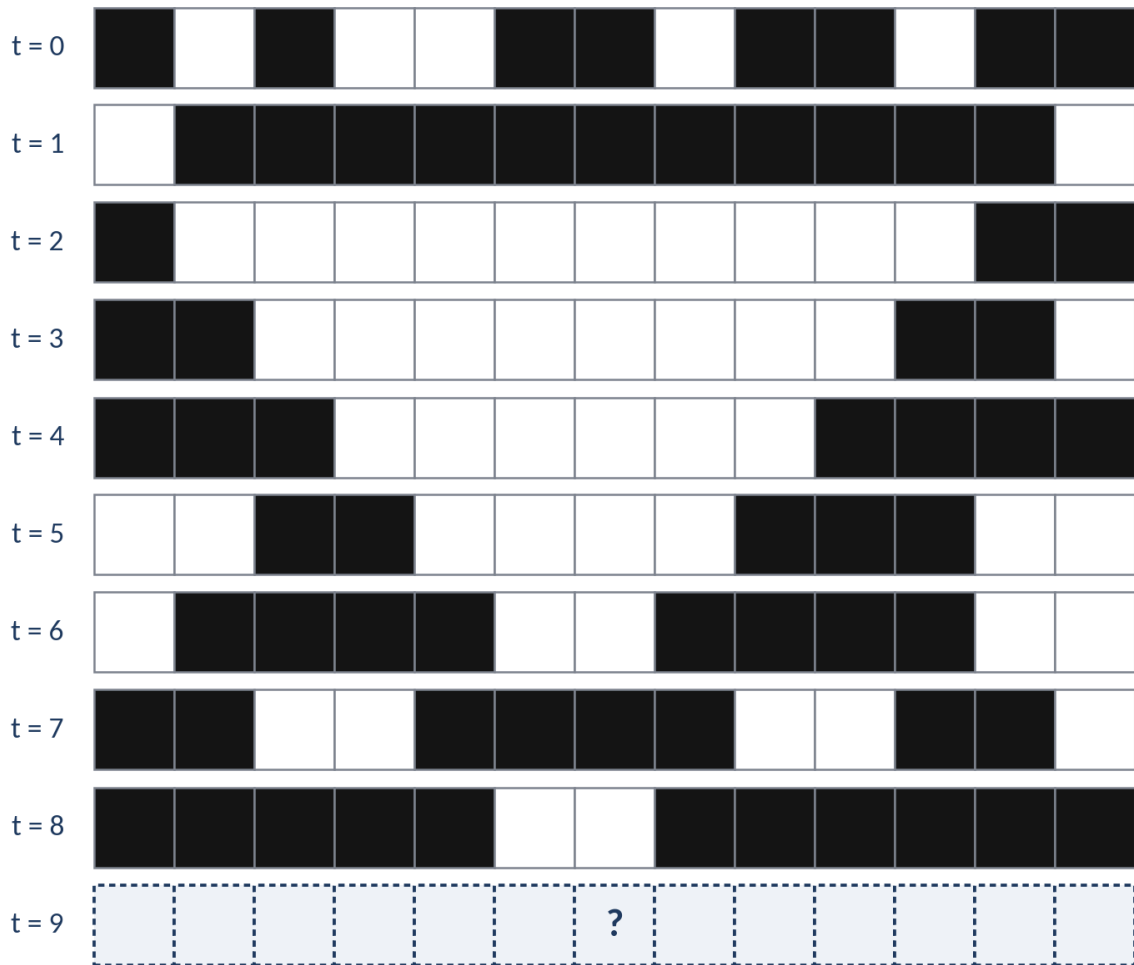
A ring of sixteen cells (the ends are joined). Black discs travel right, white discs travel left, one cell per tick; gray blocks stay put. When things meet, the world's laws decide what happens - and one of those laws changed once. Draw the ring at $t = 10$.



Record your answer on the Answer Sheet.

The Damaged Transmission

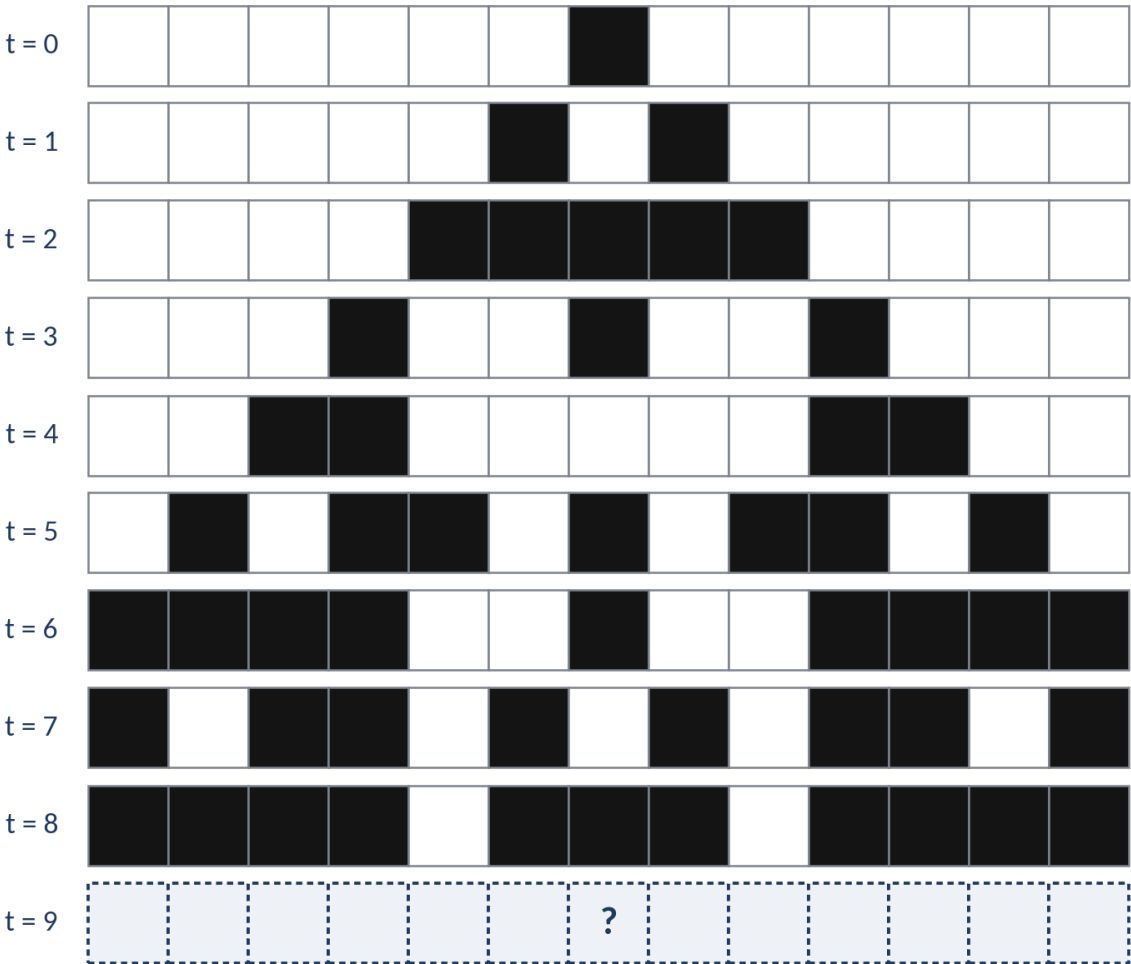
A distant machine computes each strip from the one above it by one fixed local law (ends joined); the law never changes. Its record reached us with exactly two cells miscopied, none of them in the first strip. Give (a) the two miscopied cells (time and position, positions counted 1-13 from the left) and (b) the true strip at $t = 9$.



Record your answer on the Answer Sheet.

The Machine That Remembers

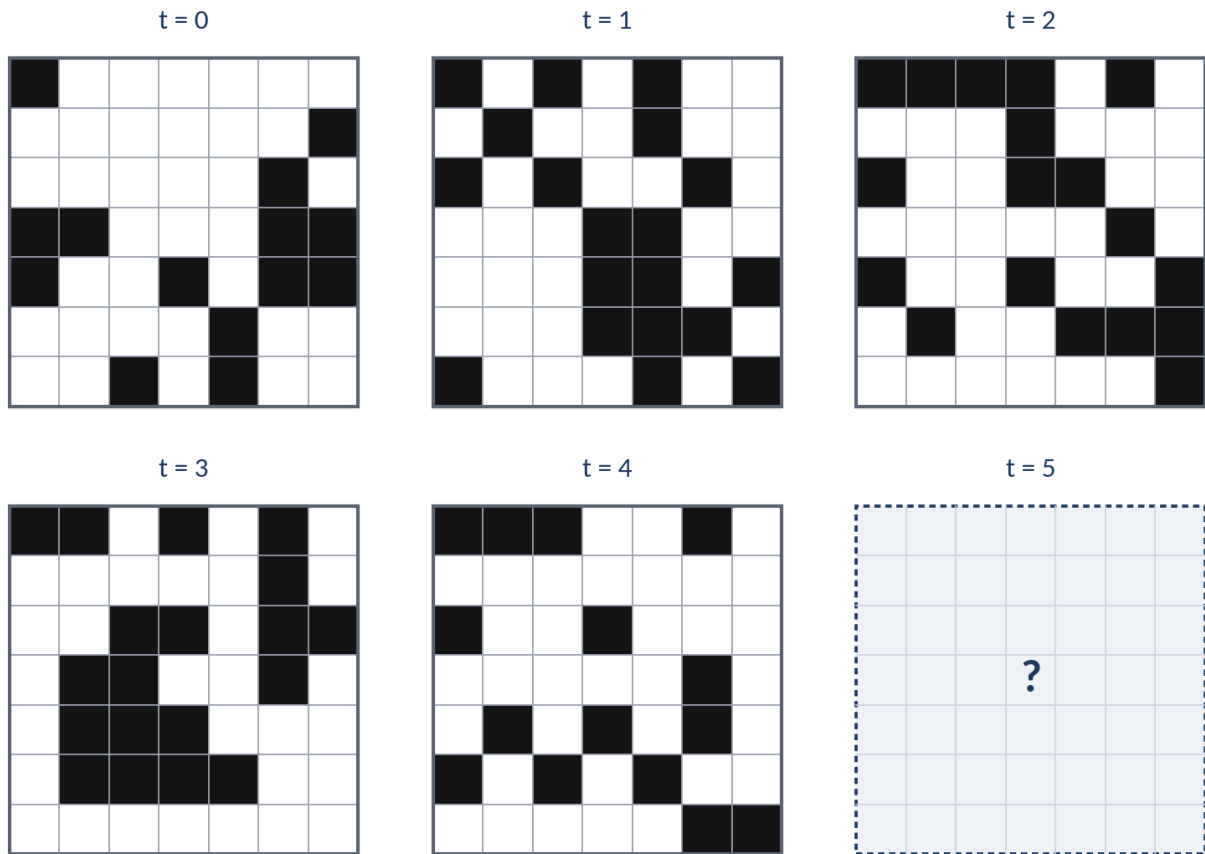
Each strip is produced by a fixed law (ends joined). Fill in the strip at $t = 9$.



Record your answer on the Answer Sheet.

Alien Life

A 7 x 7 colony on a doughnut-shaped surface (each edge is joined to the opposite edge). A cell's next color depends only on its own color and on how many of its eight neighbors are black, by a law that may have changed once. Draw the colony at $t = 5$.



Record your answer on the Answer Sheet.

The Unseen Lamp

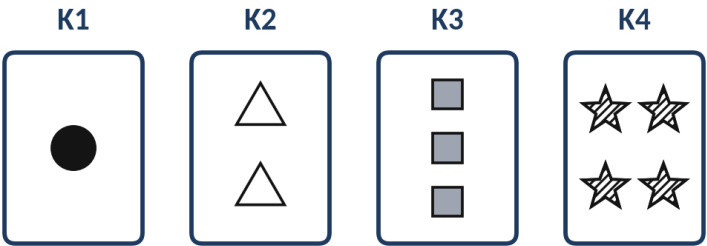
Four lamps A-D are visible; the board may also contain hidden lamps. Every lamp (seen or unseen) follows a fixed law using at most two lamps' previous states. In Run 3, lamp B was held ON from tick 1. Run 3 now continues: B stays held ON and, from tick 7, lamp C is also held OFF. Give the states of A, B, C, D at tick 8.

Run 1					Run 2					Run 3				
	A	B	C	D	A	B	C	D	A	B	C	D		
0	☐	☒	☐	☐	☒	☒	☒	☒	☐	☐	☐	☒		
1	☐	☐	☒	☒	☐	☒	☒	☐	☒	☒	☐	☒		
2	☐	☐	☒	☐	☒	☐	☒	☐	☒	☒	☒	☒		
3	☒	☐	☒	☐	☒	☒	☒	☐	☐	☒	☒	☐		
4	☐	☒	☒	☐	☒	☒	☒	☐	☒	☒	☒	☐		
5	☐	☐	☒	☐	☐	☒	☒	☐	☐	☒	☒	☐		
6	☐	☐	☒	☐	☒	☐	☒	☐	☒	☒	☒	☐		

Record your answer on the Answer Sheet.

The Oracle Who Learns

The same four key cards as in Section III. From trial 31 on, the player places every card correctly. Where must the cards of trials 31-34 be placed?

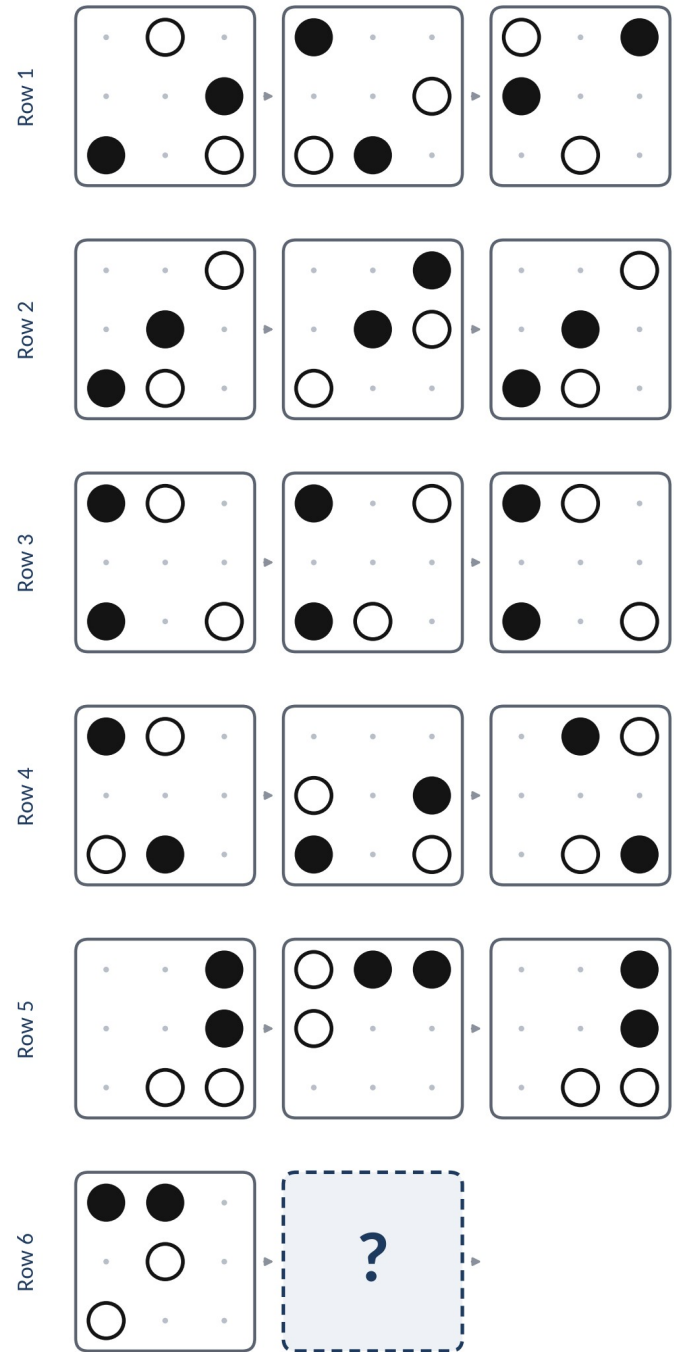


Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle	Trial	Card	Placed on	Oracle
1		K2	✓	13		K1	✓	25		K1	✓
2		K1	✓	14		K1	✓	26		K1	✗
3		K2	✗	15		K4	✓	27		K2	✓
4		K4	✓	16		K3	✗	28		K3	✓
5		K1	✗	17		K1	✓	29		K1	✓
6		K2	✓	18		K3	✓	30		K1	✓
7		K4	✓	19		K1	✗	31		?	
8		K1	✓	20		K4	✗	32		?	
9		K1	✓	21		K3	✓	33		?	
10		K4	✓	22		K1	✓	34		?	
11		K1	✗	23		K1	✓				
12		K1	✓	24		K4	✓				

Record your answer on the Answer Sheet.

The Composition Engine

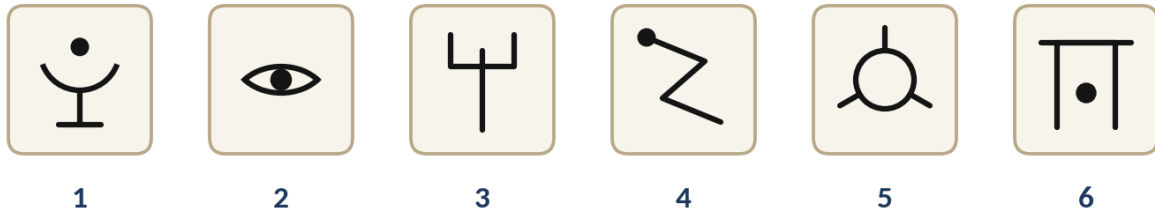
Within each row one hidden motion is applied twice. The motion is different in every row, but the rows are not independent. Draw the second panel of row 6.



Record your answer on the Answer Sheet.

The Scribes' Algebra

Six glyphs name the six ways of handling a certain unseen object (one of them is 'leave it as it is'; every way can be undone by one of the six). A record 'X Y → Z' states that handling the object in way X and then in way Y has the same effect as handling it in way Z. The fifteen records below were written in this order, but at some point the scribes silently changed how they write a record. Records 16-18 are written in the scribes' present style: complete them (answer with glyph numbers).



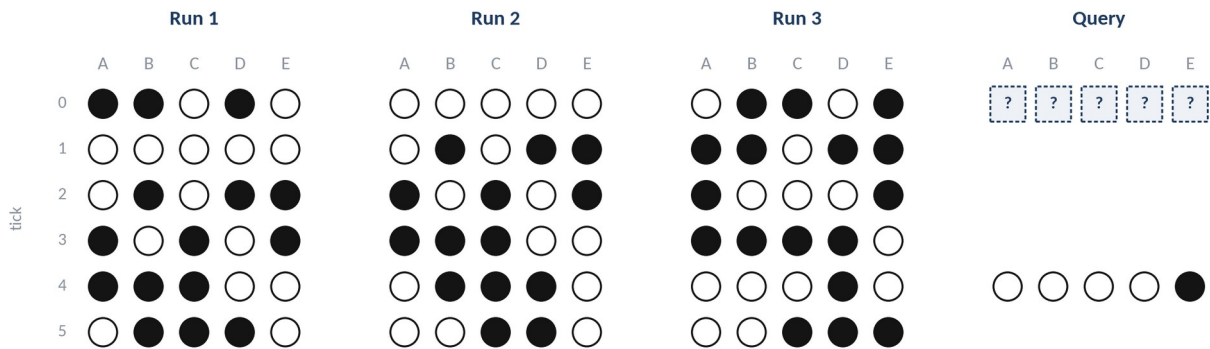
1	  → 	6	  → 	11	  → 
2	  → 	7	  → 	12	  → 
3	  → 	8	  → 	13	  → 
4	  → 	9	  → 	14	  → 
5	  → 	10	  → 	15	  → 

16	  → ?	17	  → ?	18	  → ?
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Record your answer on the Answer Sheet.

The Archaeologist

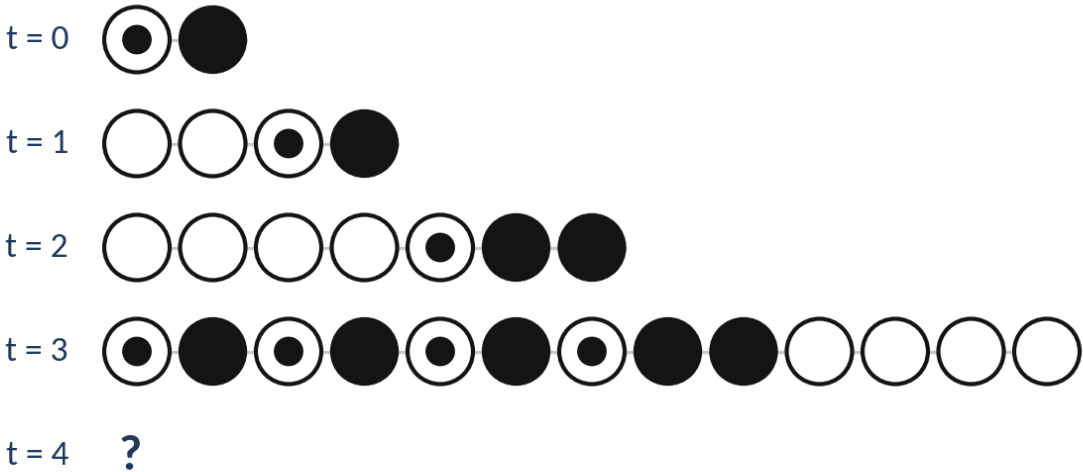
Runs 1-3 show the lamp board working normally (no lamp held). In the Query run nothing is held either; only the state at tick 4 survives. What was the state of all five lamps at tick 0?



Record your answer on the Answer Sheet.

The Migrating Grammar

Each necklace grows from the one above: every bead is replaced, all at once, by a string determined by its kind. No single set of replacements produces all four necklaces. Write the necklace at $t = 4$.



Record your answer on the Answer Sheet.

Answer Sheet

PROTEUS · Form A · booklet version 1.1

Candidate	
Full name	
E-mail	
Date submitted	
Other test scores (optional, for norming)	

Declaration. I worked on this test entirely alone, without help from any person, published solution, search engine, AI system or computer program, and this is my first and only attempt at PROTEUS Form A.

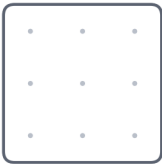
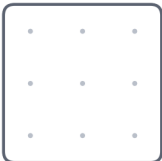
Signature: _____ Date: _____

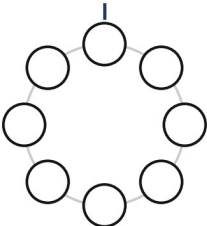
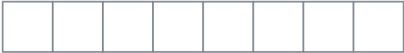
How to submit. Scan or photograph every page of this Answer Sheet, or type your answers in the notation of page 4, and email them to the test author, Jo Christopher Resquites, MEng, at:

jresquites@mensaphilippines.org

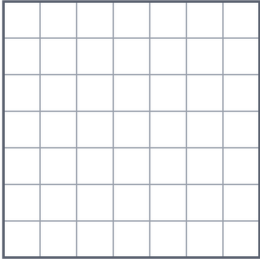
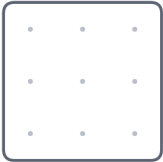
Subject line: "PROTEUS Form A — answers — your full name". Attach proof of payment of the scoring fee. Pay securely by PayPal at: www.paypal.com/ncp/payment/WCCP3YF5472VS

No.	Item	Your answer
1	The Canceling Veil Section I	Mark ● and ○.
2	The Turning Mirror Section I	Mark ● and ○.
3	Two Tides Section I	Mark ● and ○.

No.	Item	Your answer
4	The Silent Switchman Section I	 Mark ● and ○.
5	The Metronome Section I	 Mark ● and ○.
6	The Turncoat Signal Section I	 Mark ● and ○.
7	The Eclipse Section II	 Fill the black cells.
8	The Twin Laws Section II	 Fill the black cells.
9	The Seed Grammar Section II	Necklace (left to right): _____ _____
10	The Mutating Grammar Section II	Necklace (left to right): _____ _____
11	The Inchworm Section II	 Fill the black cells.
12	Two Voices Section II	 Fill the black cells.
13	The Oracle Changes Its Mind Section III	Trial 19: K__ Trial 20: K__ Trial 21: K__ _____

No.	Item	Your answer
14	The Line of Assent Section III	Acceptable cards (letters): _____
15	Two Masters Section III	Trial 19: K__ Trial 20: K__ Trial 21: K__ Trial 22: K__ _____
16	The Returning Law Section III	Trial 20: K__ Trial 21: K__ Trial 22: K__ _____
17	The Crooked Oracle Section III	Trial 21: K__ Trial 22: K__ Trial 23: K__ _____
18	The Restless Oracle Section III	Trial 25: K__ Trial 26: K__ Trial 27: K__ Trial 28: K__ _____
19	The Current Law Section IV	Necklace (left to right): _____
20	The Turning Necklace Section IV	 Fill the black beads.
21	The Component Law Section IV	V W X Y Z  State of V-Z at tick 3.
22	Mutual Translation Section IV	 Fill the black cells.
23	The Alien Alignment Section IV	 Fill the black beads (top to bottom).

No.	Item	Your answer
24	The Inverted Dictionary Section IV	Fill the black cells.
25	The Relay Section V	A B C D E Mark each lamp ● or ○.
26	The Gatekeeper Section V	A B C D E Mark each lamp ● or ○.
27	The Twins Section V	A B C D E Mark each lamp ● or ○.
28	The Broken Wire Section V	A B C D E Mark each lamp ● or ○.
29	The Helmsman Section V	Every hold that works (lamp + ON/OFF):
30	The Echo That Never Was Section V	A B C D E Mark each lamp ● or ○.
31	The Ecology of Walls Section VI	Mark ● (black disc), ○ (white disc) or ■ (block) in each occupied cell.
32	The Damaged Transmission Section VI	(a) Miscopied cells: $t = \underline{\hspace{1cm}}$, position $\underline{\hspace{1cm}}$ and $t = \underline{\hspace{1cm}}$, position $\underline{\hspace{1cm}}$ (b) True strip at $t = 9$:
33	The Machine That Remembers Section VI	Fill the black cells.

No.	Item	Your answer
34	Alien Life Section VI	 Fill the black cells.
35	The Unseen Lamp Section VI	A B C D  States at tick 8.
36	The Oracle Who Learns Section VI	Trial 31: K__ Trial 32: K__ Trial 33: K__ Trial 34: K__ _____
37	The Composition Engine Section VI	 Mark ● and ○.
38	The Scribes' Algebra Section VI	Record 16: ____ Record 17: ____ Record 18: ____ (glyph numbers) _____
39	The Archaeologist Section VI	A B C D E  Mark each lamp ● or ○.
40	The Migrating Grammar Section VI	Necklace (left to right): _____ _____

For the administrator: raw score ____ / 40 IQ ($\sigma = 15$) ____ scored by _____