

FACULTY REFERENCE · CLASS 05 · LOGICAL REASONING (ANALYTICAL)

Double Row Seating – FACULTY REFERENCE

Internal use only

Lecture script

Practice 02 answers

Method anchors

PURPOSE

Faculty preparation document for Lecture 02 (Double Row) and Practice Sheet 02. The student-facing lecture deck carries no answers or rider questions on screen. This sheet is the prep + safety-net so the faculty walks into class with the full final arrangement and method anchor for every example and every practice puzzle.

HOW TO USE

Read this sheet before class. Do not project; do not distribute. Section A is the concept-slide teaching script. Section B carries the FIVE Practice Sheet 02 puzzles fully solved (final arrangement, anchor, method, every rider's answer). Section C is anchor-only for the 12 in-class examples — faculty solves the body live with class participation, which is the right pedagogical rhythm at L2.

A · LECTURE SCRIPT

Slides 04 · 05 · 06 · 07 · 09 · 10 — concept talking points

Concept 01 · The Frame (slide 04)

- Open with the rule: two parallel rows means two facing arrows. ALWAYS label both arrows on the board before placing anyone.
- Draw both rows stacked vertically. Top row faces South (down arrow), bottom row faces North (up arrow) — default. Note: this is the most common CLAT configuration.
- Same-row vs cross-row vocabulary: 'sits opposite' = directly across; 'in same row' = same row only. Drill these by drawing arrows on the board between paired seats.
- Each row has its OWN left end and right end. Don't generalise.
- Memorise card: Row 1's left and Row 2's left point OPPOSITE WAYS on paper. That is the source of every per-row inversion error.

Concept 02 · Cross-Row Clues (slide 05)

- Three cross-row clue types: 'opposite', 'diagonally opposite', 'in the same row'.
- 'Opposite' = zero column offset, different row. Pair always lines up vertically.
- 'Diagonally opposite' = one column offset, different row. Always verify the direction (clockwise or anti).
- 'In the same row' restricts both people to the named row — no cross-over possible.
- READ TWICE warning: half the CLAT double-row traps come from confusing 'opposite' with 'diagonally opposite'.

Concept 03 · Per-Row Inversion (slide 06)

- Row 1 faces South → left is east on paper; right is west.
- Row 2 faces North → left is west on paper; right is east.
- Apply BOTH rules at the same time. Don't import one row's logic into the other.
- Per-person left/right within a row: even in single-direction rows, every left/right is from the named person's perspective.
- THE TRAP: mixing rows on left/right is the #1 mark-loser. Always: which row first, then which direction?

Concept 04 · Anchor Strategy (slide 09)

- Step 1: tag every positive cross-row clue ('X opposite Y'). Each fixes one person's column.
- Step 2: anchor the most-fixed end clue. 'X at the left end of Row 1' is gold.
- Step 3: propagate within each row using nth-to-the clues.
- Step 4: cross to the other row via opposite-clues. Anchored person + opposite = placed.
- Step 5: final-check sweep across BOTH rows. Verify every clue against the full diagram.
- Timing: target 6 min diagram + 3 min riders. Restart at 4 min if no convergence.

Concept 05 · Common Errors (slide 10)

- Drawing one row instead of two — skim-reading the prompt.
- Importing Row 1's facing onto Row 2 left/right calls.
- Confusing 'opposite' and 'diagonally opposite'.
- Forgetting which row a named person sits in — always: which row? then which position?
- Missing the final-check sweep across BOTH rows. CLAT loves this trap.

B · FULLY-SCRIPTED EXAMPLES

Examples 01 · 02 · 03 — problem · final · method ·
sample riders

EX 01 Practice Set 01 — 5+5 opposite-facing basic

PROBLEM

Row 1 (P,Q,R,S,T) face South. Row 2 (A,B,C,D,E) face North. P left end Row 1; A opposite P; B immediate right of A (reader); Q opposite B; C right end Row 2; R opposite C; S between Q and T with only one person between S and right end of Row 1; D right of E in Row 2 (reader).

FINAL **Row 1: P Q S T R (cols 1-5, facing South) Row 2: A B E D C**
(cols 1-5, facing North)

ANCHOR P at left end Row 1 (col 1). A opposite P (col 1 Row 2). Reader-right of A = B (col 2). Q opposite B (col 2). C at right end Row 2 (col 5). R opposite C (col 5 Row 1). S between Q (col 2) and T with one person between S and col 5 → S at col 3. T at col 4. Row 2 leftover cols 3, 4 = E, D with D immediate right of E (reader) → E=3, D=4.

METHOD STEPS

1. Place P at Row 1 col 1 (anchor 1).
2. Place A opposite P at Row 2 col 1.
3. B immediate right of A (reader) → Row 2 col 2.
4. Q opposite B → Row 1 col 2.
5. C at right end of Row 2 → col 5; R opposite C → Row 1 col 5.
6. S between Q (col 2) and T with one person between S and col 5 → S = col 3, T = col 4.
7. Row 2 remaining cols 3, 4 → E, D with D right of E (reader) → E=3, D=4.

SAMPLE RIDERS (ask orally)

Question	Answer	Note
Q1. Right end of Row 1?	(D) R	Row 1 cols 1-5 = P Q S T R; right end col 5 = R.
Q2. Opposite T?	(D) D	T = Row 1 col 4 → Row 2 col 4 = D.
Q3. Between S and R in Row 1?	(B) One	S=3, R=5; col 4 = T = 1 person.
Q4. Immediate left of E (reader)?	(B) B	E = Row 2 col 3; reader-left col 2 = B.
Q5. Two left ends?	(A) P and A	Row 1 left = P; Row 2 left = A.

EX 02 Practice Set 02 – 5+5 + profession combo

PROBLEM

Row 1 P-T face South; Row 2 A-E face North. P right end Row 1 = doctor; A opposite P = engineer; Q to P's immediate right (P's view) = lawyer; R second to P's right = architect; S to R's immediate right (R's view) = journalist; T fills last Row 1 slot = designer. B to A's immediate left (A's view) = teacher; C opposite R = banker; E left end Row 2 = scientist; D between C and E = chef.

FINAL

Row 1: T S R Q P (cols 1-5, facing South; designer / journalist / architect / lawyer / doctor) Row 2: E D C B A (cols 1-5, facing North; scientist / chef / banker / teacher / engineer)

ANCHOR

P at Row 1 col 5 (right end, reader). P faces S → P's right = west on paper. Q = P's right = col 4. R = second to P's right = col 3. S = R's right (west) = col 2. T fills col 1. Row 2: A opp P = col 5. A faces N → A's left = west = col 4 = B. C opp R = col 3. E at left end = col 1. D fills col 2 (between C and E).

METHOD STEPS

1. P right end Row 1 → col 5.
2. P faces S → P's right = west → Q at col 4.
3. R second to P's right (west) → col 3.
4. R's right (west) → S at col 2; T fills col 1.
5. A opposite P → Row 2 col 5.
6. A's left (west) → B at Row 2 col 4.
7. C opposite R → Row 2 col 3.
8. E at Row 2 left end → col 1; D fills col 2 between C and E.

SAMPLE RIDERS (ask orally)

Question	Answer	Note
Q6. Journalist?	(B) S	Direct clue: S is the journalist.
Q7. Opposite teacher?	(B) Q (lawyer)	Teacher = B (col 4) → opposite = Q (col 4) = lawyer.
Q8. Immediate left of T (T's view)?	(B) S	T col 1 faces S → T's left = east = col 2 = S.
Q9. Chef opposite whom?	(B) S	Chef = D (col 2) → opposite = S (col 2).
Q10. Right end of Row 2 (reader)?	(A) A	Row 2 cols 1-5 = E D C B A; right end col 5 = A.

EX 03 Practice Set 03 – 5+5 + colour combo

PROBLEM

Row 1 J-N face South; Row 2 U-Y face North. K left end Row 1 = red; U opposite K = blue. L to K's left (K's view) = purple; M to L's left = black; N to M's left = white; J fills last slot = grey. V opp L = green; W opp M = yellow; X opp N = orange; Y opp J = pink.

FINAL

Row 1: K L M N J (cols 1-5, facing South; red / purple / black / white / grey) Row 2: U V W X Y (cols 1-5, facing North; blue / green / yellow / orange / pink)

ANCHOR

K at Row 1 col 1. K faces S → K's left = east. L = K's left = col 2. M = L's left = col 3. N = M's left = col 4. J = col 5. Row 2 by direct 'opposite' clues at every column.

METHOD STEPS

1. K at left end Row 1 → col 1; K likes red.
2. U opposite K → Row 2 col 1; U likes blue.
3. L to K's left (K's view, K faces S → east) → col 2; L = purple.
4. M to L's left (east) → col 3; M = black.
5. N to M's left (east) → col 4; N = white.
6. J fills col 5; J = grey.
7. V, W, X, Y placed opposite L, M, N, J at cols 2, 3, 4, 5 → green, yellow, orange, pink.

SAMPLE RIDERS (ask orally)

Question	Answer	Note
Q11. Right end of Row 1?	(D) J	Row 1 cols 1-5 = K L M N J; right end = J.
Q12. Yellow?	(C) W	W likes yellow (direct clue).
Q13. Between K and N in Row 1?	(B) Two	K=1, N=4; cols 2, 3 = L, M = 2 friends.
Q14. Purple opposite which colour?	(B) Green	Purple = L (col 2) → opposite V = green.
Q15. Third to K's left (K's view)?	(C) N	K faces S → K's left = east → col 4 = N.

EX 04 Practice Set 04 – 5+5 + weekday combo

PROBLEM

Row 1 A-E face South; Row 2 P-T face North. Each on a weekday Mon-Fri; exactly 2 per day (one per row). A left end Row 1 = Mon. P opposite A = Fri. B-D placed by chain to A's left (A's view) = Tue, Wed, Thu. E fills last slot = Fri. Q-T placed opposite in Row 2 with their respective weekdays.

FINAL

Row 1: A B C D E (cols 1-5, facing South; Mon / Tue / Wed / Thu / Fri)
Row 2: P Q R S T (cols 1-5, facing North; Fri / Tue / Mon / Wed / Thu)

ANCHOR

A at Row 1 col 1 = Mon. A faces S → A's left = east. B = A's left = col 2 = Tue. C = B's left = col 3 = Wed. D = C's left = col 4 = Thu. E = col 5 = Fri. Row 2 by direct opposite clues.

METHOD STEPS

1. A at Row 1 col 1 = Monday (anchor).
2. P opposite A → Row 2 col 1 = Friday.
3. B at Row 1 col 2 (A's left) = Tuesday.
4. Q opposite B → Row 2 col 2 = Tuesday.
5. C at Row 1 col 3 = Wednesday; R opposite C → Row 2 col 3 = Monday.
6. D at Row 1 col 4 = Thursday; S opposite D → Row 2 col 4 = Wednesday.
7. E at Row 1 col 5 = Friday; T opposite E → Row 2 col 5 = Thursday.

SAMPLE RIDERS (ask orally)

Question	Answer	Note
Q16. Wednesday in Row 2?	(C) S	S = Row 2 col 3 (opposite C, col 3) but S's weekday = Wed (direct clue).
Q17. Opposite Thursday-attendee from Row 1?	(D) T	Thursday Row 1 = D (col 4) → opposite = T.
Q18. Reader-right of Q?	(B) R	Q = col 2; reader-right of col 2 = col 3 = R.
Q19. Between B and right end of Row 1?	(B) Two	B=2, right end=5; cols 3, 4 = C, D = 2.
Q20. Two Friday-attendees?	(B) E and P	Fri Row 1 = E; Fri Row 2 = P.

EX 05 Practice Set 05 — 5+5 CLAT-stretch

PROBLEM

Row 1 J-N face South; Row 2 U-Y face North. K at one end Row 1; K opp U; U left end Row 2. L to K's left (K's view); M to L's left; J at right end Row 1; N between M and J. V opp N; W opp M; Y to W's left (W's view); X fills last slot in Row 2.

FINAL **Row 1: K L M N J (cols 1-5, facing South) Row 2: U Y W V X (cols 1-5, facing North)**

ANCHOR U at Row 2 col 1; K opp U → Row 1 col 1 (K at 'one end' confirmed as left end). K faces S → K's left = east → L at col 2. M at col 3 (L's left). J at col 5 (right end). N between M (col 3) and J (col 5) → col 4. Row 2: V opp N = col 4; W opp M = col 3; Y to W's left (W faces N → left = west) = col 2; X = col 5.

METHOD STEPS

1. U at Row 2 col 1 (left end).
2. K opposite U → Row 1 col 1; this is the 'one end' (left end).
3. L = K's left (K faces S → east) = col 2.
4. M = L's left = col 3.
5. J at Row 1 right end = col 5.
6. N between M (col 3) and J (col 5) = col 4.
7. V opposite N → Row 2 col 4.
8. W opposite M → Row 2 col 3.
9. Y = W's left (W faces N → west) = col 2.
10. X fills Row 2 col 5.

SAMPLE RIDERS (ask orally)

Question	Answer	Note
Q21. Right end of Row 2 (reader)?	(C) X	Row 2 cols 1-5 = U Y W V X; right end = X.
Q22. Opposite L?	(D) Y	L = Row 1 col 2 → opposite = Row 2 col 2 = Y.
Q23. Between K and J in Row 1?	(C) Three	K=1, J=5; cols 2, 3, 4 = L, M, N = 3 people.
Q24. Third to U's right (U's view)?	(B) V	U faces N → U's right = east. Cols 2, 3, 4; third = col 4 = V.

C · ANCHOR-ONLY EXAMPLES

Examples 04 — 12 — solve live with class participation

EX 01 5+5 basic opposite-facing

Live class warm-up. Use this to drill 'label both arrows first' habit.

FINAL **Row 1 (S): P Q ? T R · Row 2 (N): A B ? D C — exact remaining slot for E/middle depends on faculty's chosen clue chain.**

ANCHOR P left end Row 1; A opposite P; cascade via B right of A and Q opposite B; C right end Row 2 and R opposite C; class fills E and middle slots live.

EX 02 5+5 cross-row cascade

Drill cross-row clue use. K at right end Row 1; X opposite K.

FINAL **Row 1 (S): cascade from K right end · Row 2 (N): cascade from X.**

ANCHOR K right end Row 1 → X opposite K → L to K's left → cascade Row 1 first, then bridge to Row 2 via opposite clues.

EX 03 6+6 with profession overlay

First combo example. Place positions first, then map professions.

FINAL **Row 1 has 6 seats; Row 2 has 6 seats; doctors face N (Row 2), engineers face S (Row 1).**

ANCHOR Anil (engineer) left end Row 1 → Bina (doctor) opposite Anil. Profession layered after positions are pinned.

EX 04 5+5 + colour combo

Practice the 2-attribute table technique. Don't pack both onto seat labels.

FINAL **Row 1 (S): Red, ?, ?, ?, ? · Row 2 (N): Blue, ?, ?, ?, ? – class derives the rest.**

ANCHOR Red-fan left end Row 1; Blue-fan opposite. Green second to Red's right; Yellow to Green's left.

EX 05 6+6 with diagonal clues

Drill 'diagonally opposite' precisely. Count the column offset before placing.

FINAL **P opp W; R diagonally opp W (one column off).**

ANCHOR Use diagonal clue to teach the offset rule: same row vs cross row vs diagonal cross row.

EX 06 5+5 – same-direction rows

Rare CLAT variant. Both rows face same direction; 'in front of' replaces 'opposite'.

FINAL **Row 1 P,Q,?,?,R · Row 2 A,B,?,?,C – same direction = both face North.**

ANCHOR P left end Row 1, A left end Row 2; P in front of A (same column). Q-R chain forward; A-C chain forward.

EX 07 5+5 – anchor-poor set

Teach 'no ends → use opposite-clues as anchors' technique.

FINAL **No ends named – anchor via A opp P and B opp Q with P, Q at the two ends of Row 1.**

ANCHOR Recognise that P + Q at row-ends gives effective end anchor via their opposites in Row 2. Cascade from there.

EX 08 7+7 – heavy CLAT set

Stretch problem; only attempt if class is tracking well.

FINAL **T at centre Row 1; D opposite T. Build outward from centre.**

ANCHOR Centre-of-row anchor (T = col 4 in a 7-row) is the strongest anchor here. Chain to ends via nth-to clues.

EX 09 5+5 mixed within row

Rare case: Row 1 has internal mixed facing. Per-person inversion applies WITHIN Row 1.

FINAL Row 1 has 3 N + 2 S; Row 2 all N. P at left end faces N; Q faces S in Row 1.

ANCHOR Distinguish row-level facing (Row 2 all N) from in-row mixed facing (Row 1). Each Row-1 person's left/right computed individually.

EX 10 6+6 + weekday combo

Class extension of Practice Set 04 pattern. Six weekdays, exactly one per person each.

FINAL Monday left end Row 1 → Friday opposite. Wednesday third to Monday's right.

ANCHOR Build the weekday chain across Row 1 first; map opposites to Row 2 weekdays.

EX 11 5+5 reverse – Row 2 first

Teach that you don't always start from Row 1. When Row 2 has the most anchors, solve Row 2 first.

FINAL A left end Row 2; E right end Row 2; B right of A; D left of E; C at centre Row 2.

ANCHOR All anchors are in Row 2. Build Row 2 fully, then drop opposite clues to Row 1.

EX 12 PYQ-style 5+5 capstone

End-of-lecture stretch. Mirrors CLAT 2023 double-row pattern.

FINAL Row 1 P at left end faces S → A opposite (Row 2). Q, R, S, T cascade with mid-row 'between' clue.

ANCHOR Standard 5+5 with one mid-row 'between' rider. Build incrementally; sweep both rows at the end.

D · COMMON STUDENT TRAPS

Drill checklist — call these out as they appear in class

- Drawing only one row instead of two. Read 'two parallel rows' explicitly; sketch both BEFORE placing anyone.
- Importing Row 1's facing onto Row 2. Each row has its OWN arrow; label both first.
- Confusing 'sits opposite' with 'diagonally opposite'. Opposite = same column; diagonally opp = one column off.
- Forgetting per-row inversion. Row 1 face S → left is east on paper; Row 2 face N → left is west on paper.
- Mixing rows on left/right calls. Always ask: which row first? then which direction does that row face?
- Skipping the final-check sweep across BOTH rows. The cross-row check is the CLAT-specific trap.
- Starting from negative clues ('X is NOT opposite Y'). Negatives prune, they never place.
- Applying same-row 'between' to cross-row pairs. 'Between' is row-local unless the clue says otherwise.

E · TIMING BENCHMARKS

Class pacing + per-set CLAT benchmarks

Phase	Target	Note
Diagram build (5+5)	4 min	Anchor + cross-row opposite + per-row chain + sweep
Diagram build (6+6 / 7+7)	5 min	Heavier setup; one extra column per row
Riders (4-5 questions)	2-3 min	Cross-row riders take ~10 sec extra each

Phase	Target	Note
Full CLAT set	6-7 min	Hard cap. Beyond 7 min on one set, move on.
First diagnostic restart	≤ 4 min in	If diagram hasn't converged by 4 min, restart the branch.
Practice 02 sheet	24 min flat	5 puzzle sets, ≈ 4.8 min per set including riders.