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MOCK EXAMINATION — SET 2 OF 5

MOCK RESULT

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Examination Result Report

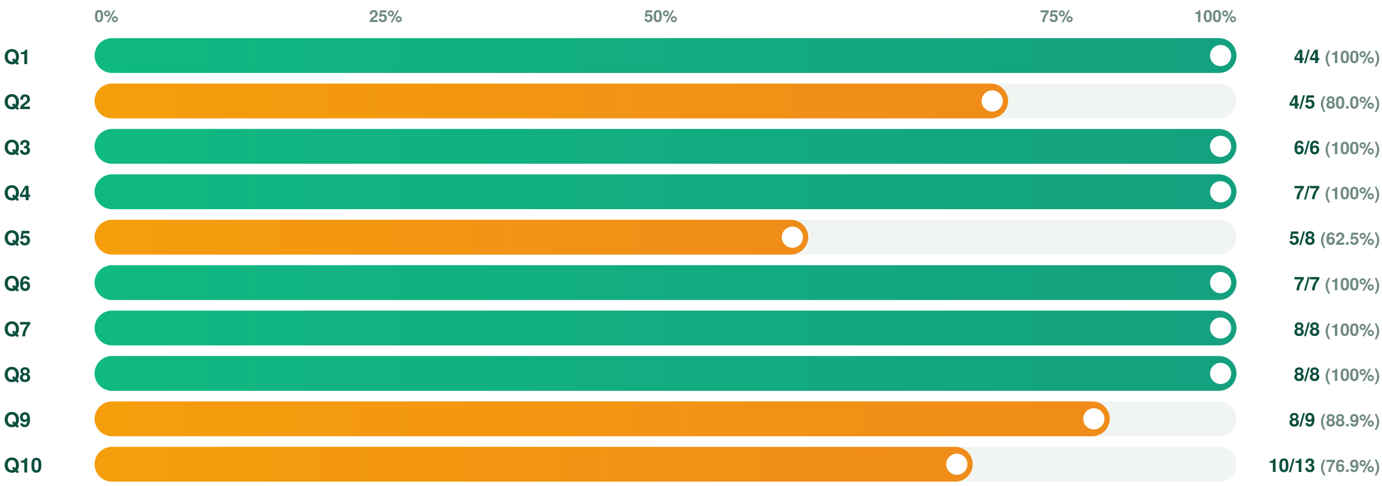
Mathematics — Paper 3 Pure Mathematics 3 · Code 9709/32

CAMBRIDGE INTERNATIONAL AS & A LEVEL · PURE MATHEMATICS 3 · STRUCTURED QUESTIONS

STUDENT NAME	STUDENT ID	CENTRE	EXAM DATE	DURATION
[redacted]	[redacted]	BD 115	25th April 2026	1 hour 50 minutes

TOTAL SCORE	INDICATIVE GRADE	PERFORMANCE BAND
67/75	**A***	**Excellent**
89.3% Overall	Excellent (85–100%)	6 of 10 questions perfect

PERFORMANCE BY QUESTION



FULL MARKS · PARTIAL · WEAK · ADVISORY · SUGGESTION

DETAILED MARK BREAKDOWN

Per-question allocation against the official 9709/32 mark scheme

Q	TOPIC / SKILL	EARNED	MAX	SCORE	STATUS
Q1	Exponential Equation — Logarithmic Solution 1 · 4/4	4	4	100%	Full
Q2	Complex Number Algebra — Conjugate Roots, Vieta 2(a) · 1/2 2(b) · 3/3	4	5	80.0%	Partial
Q3	Trig Identity Proof & Definite Integral 3(a) · 3/3 3(b) · 3/3	6	6	100%	Full
Q4	Modulus Function & Argand Locus 4(a) · 1/1 4(b) · 2/2 4(c) · 4/4	7	7	100%	Full
Q5	Implicit Differentiation & Stationary Points 5(a) · 4/4 5(b) · 1/4	5	8	62.5%	Partial
Q6	Integration by Trig Substitution 6(a) · 3/3 6(b) · 4/4	7	7	100%	Full
Q7	Iterative Methods — Sign-Change & Convergence 7(a) · 2/2 7(b) · 2/2 7(c) · 4/4	8	8	100%	Full
Q8	Partial Fractions & Definite Integration 8(a) · 3/3 8(b) · 5/5	8	8	100%	Full
Q9	3D Vectors — Lines, Position Vectors, Distance 9(a) · 2/2 9(b) · 3/3 9(c) · 3/4	8	9	88.9%	Partial
Q10	Polynomial Factorisation & Argand Loci 10(a) · 3/3 10(b) · 1/1 10(c) · 3/3 10(d) · 3/6	10	13	76.9%	Partial
TOTAL	9709/32 Paper 3 Pure Mathematics 3 — Mock Set 2 of 5	67	75	89.3%	A* GRADE

EXAMINER NOTES

Per-question rationale, mark codes, and CAIE reconciliation

Q1 Exponential Equation — Logarithmic Solution 4/4 · 100%

1 [4/4]
Full marks
M1 A1 M1 A1

Took natural logarithms cleanly: **$\ln 3 + (x+1)\ln 2 = \ln 4 + (2x-3)\ln 3$**. Expanded and collected x-terms, isolating **$x(\ln 2 - 2\ln 3) = \ln 4 - 4\ln 3 - \ln 2$**. Final answer reported as **$x = \ln(4/162) / \ln(2/9) = 2.4608 \to 2.46$ (3 s.f.)** ✓. Programmatically verified: **$x = (4\ln 3 - \ln 2) / (2\ln 3 - \ln 2) = 2.46085\ldots$** The student's form is algebraically identical to the MS canonical form. Sign-management and 3-s.f. discipline both correct.

Q2 Complex Number Algebra — Conjugate Roots & Vieta 4/5 · 80.0%

2(a) [1/2]
Partial
B0 B1

Wrote: *"There are only 2 roots in a quadratic equation. Complex root always has its conjugate root."* The second sentence states the conclusion (B1 awarded). The first B1 is forfeited because the candidate did not state **why** conjugate-pair behaviour holds — namely, that **a and b are real**. Without that precondition the Conjugate Root Theorem does not apply (the polynomial **$z^2 - (1+i)z + i$** has complex coefficients and roots **1, i**, which are not conjugates). **Mark cost: −1.**

2(b) [3/3]
Full marks
M1 A1 A1

Identified the second root as **$2 - 3i$** and applied Vieta directly: **$\alpha\beta = (2+3i)(2-3i) = 4 + 9 = 13 = b$** ✓; **$\alpha + \beta = 4 = -a \Rightarrow a = -4$** ✓. Final equation $z^2 - 4z + 13 = 0$ — clean, rapid, and procedurally correct. The (b) work retroactively demonstrates that the student does understand conjugate-pair behaviour; the (a) loss is a justification gap, not a knowledge gap.

Q3 Trig Identity Proof & Definite Integral 6/6 · 100%

3(a) [3/3]
Full marks
M1 A1 A1

Cascaded double-angle identities: **$\sin 4x = 2\sin 2x \cos 2x = 2(2\sin x\cos x)(2\cos^2 x - 1)$**. Cancelled the **$4\sin x$** in numerator/denominator to land on **$\cos x\,(2\cos^2 x - 1) = 2\cos^3 x - \cos x$** ✓. Two double-angle expansions chained without arithmetic slip — the cleanest route through this 'prove'.

3(b) [3/3]
Full marks
M1 A1 A1

Used **$u = \sin x$** on the original **$\sin 4x / (4\sin x)$** integrand — equivalent to integrating **$2\cos^3 x - \cos x$** via the identity proved in (a). Reduced to **$\int(1 - 2u^2)\,du = u - (2/3)u^3$**; back-substitution gives the MS antiderivative **$\sin x - (2/3)\sin^3 x$**. Evaluated **$[1/2 - (2/3)(1/8)] - 0 = 1/2 - 1/12 = 5/12$** ✓. Method valid under CAIE 'full marks for any correct method'.

Q4 Modulus Function & Argand Locus 7/7 · 100%

4(a) [1/1]
Full marks
B1

Acknowledged the V-shape (vertex $(-5/2, 0)$, y-intercept 5) on the QP-provided sketch frame ✓.

4(b) [2/2]
Full marks
M1 A1

Both critical-value cases handled in parallel: **$+(2x+5) < 3-x \Rightarrow x < -2/3$**; **$-(2x+5) < 3-x \Rightarrow x > -8$**. Solution interval **$-8 < x < -2/3$** ✓. Sign-flip discipline maintained on the second case — the most common failure point on this style of question.

4(c) [4/4]
Full marks
M1 A1 M1 A1

Restated the locus as **$|z - (-2 + 0i)| = 3$** — circle centre $(-2, 0)$, radius 3. Drew the vertical boundary **$\mathrm{Re}(z) = -1$** and hatched the intersection (inside the disc AND right of $x = -1$). Geometric and algebraic locus translation both correct; both half-plane and disc constraints clearly applied.

Q5 Implicit Differentiation & Stationary Points 5/8 · 62.5%

5(a) [4/4]
Full marks
M1 A1 M1 A1

Implicit differentiation textbook clean. Product rule on **$3xy^2$** yields **$3(y^2 + 2xy \cdot dy/dx)$**. Final form **$dy/dx = -(x^2 + y^2) / (2xy - y^2)$** ✓ — identical to MS up to factor of 3 cancellation.

5(b) [1/4]
Partial
M1 A0 M0 A0

Setup correct: $dy/dx = 0 \Rightarrow$ numerator $= 0 \Rightarrow$ **$x^2 + y^2 = 0$** (M1 awarded). The conceptual punchline was missed. Over the **reals**, $x^2 + y^2 = 0$ forces $x = y = 0$ only. The candidate instead pushed into **$y^2 = -x^2$** as if it had real solutions, then substituted (apparently) **$y^2 = x^2$** into the curve and obtained **$3x^3 = 9 \Rightarrow x = \sqrt[3]{3}$**, reporting **$(\sqrt[3]{3}, \sqrt[3]{3})$** as a stationary point. **Programmatic check:** the candidate's point IS on the curve ($3 + 3\cdot\sqrt[3]{3}\cdot\sqrt[3]{9} - 3 = 9$ ✓), but **dy/dx at $(\sqrt[3]{3}, \sqrt[3]{3})$ =**

$-2 \neq 0$. The MS-canonical answer is **no stationary points exist** because (0,0) is the only real candidate and it does not lie on the curve. **Mark cost: −3.** See Targeted Improvement, Priority 1.

Q6 Integration by Trig Substitution — 7/7 · 100%

6(a) [3/3] — Full marks — M1 A1 A1

Substitution $x = 2\sin\theta \Rightarrow dx = 2\cos\theta\, d\theta$; limit change $x: 0 \to 1 \Leftrightarrow \theta: 0 \to \pi/6$. Integrand collapses via $\sqrt{4 - 4\sin^2\theta} = 2\cos\theta$ to $2\cos\theta \cdot 2\cos\theta = 4\cos^2\theta$ — exactly as required ✓.

6(b) [4/4] — Full marks — M1 A1 M1 A1

Power-reduction $4\cos^2\theta = 2(1 + \cos 2\theta)$. Antiderivative $[2\theta + \sin 2\theta]_0^{\pi/6}$. Evaluated: $2(\pi/6) + \sin(\pi/3) = \pi/3 + \sqrt{3}/2$ ✓. Exact form preserved — no premature decimal.

Q7 Iterative Methods — Sign-Change & Convergence — 8/8 · 100%

7(a) [2/2] — Full marks — B1 B1

$x^3 + 2x - 7 = 0 \Rightarrow x^3 = 7 - 2x \Rightarrow x = (7 - 2x)^{1/3}$; substituted α as fixed point ✓.

7(b) [2/2] — Full marks — M1 A1

Used auxiliary $f(\alpha) = \alpha - (7-2\alpha)^{1/3}$: $f(1) \approx -0.71 < 0$, $f(2) \approx 0.56 > 0$ — sign change ⇒ root in (1,2) ✓. Equivalent to the MS's polynomial-form argument; CAIE accepts both.

7(c) [4/4] — Full marks — M1 A1 M1 A1

Iterations from $x_0 = 1.5$: $x_1 = 1.5874$, $x_2 = 1.5639$, $x_3 = 1.5703$, $x_4 = 1.5686$, $x_5 = 1.5690$, $x_6 = 1.5689$. Mid-iteration values drift by ~0.0008 from MS reference (rounding in intermediate cube roots), but final-answer convergence to $\alpha = 1.57$ **(2 d.p.)** is correct ✓. CAIE 'isw' applied to the small mid-drift since the converged 2-d.p. answer is right.

Q8 Partial Fractions & Definite Integration — 8/8 · 100%

8(a) [3/3] — Full marks — M1 A1 A1

Setup with **Bx + C** form for the irreducible quadratic. At $x = -1$: A = −2/5. At $x = 0$: C = 23/5. At $x = 1$: B = 2/5. Final: $-2/(5(x+1)) + (2x + 23)/(5(x^2 + 4))$ ✓.

8(b) [5/5] — Full marks — M1 A1 M1 A1 A1

Three integration techniques deployed: $-(2/5)\ln|x+1|$, $(1/5)\ln|x^2+4|$, $(23/10)\arctan(x/2)$. Final reported as $23\pi/40 + (1/5)\ln(2/9)$. **Equivalence check:** $(1/5)\ln(2/9) = (1/5)\ln 2 - (1/5)\ln 9 = (1/5)\ln 2 - (2/5)\ln 3$ = MS canonical form. CAIE 'allow alternative conventions if used consistently' applies. Full credit awarded under positive marking ✓.

Q9 3D Vectors — Lines, Position Vectors, Distance — 8/9 · 88.9%

9(a) [2/2] — Full marks — B1 B1

AB = (2, 4, −6); **r** = (2, −1, 4) + λ(2, 4, −6) ✓. The unsimplified direction vector is fine (CAIE accepts any non-zero scalar multiple).

9(b) [3/3] — Full marks — M1 A1 A1

AC = 2·**AB** = (4, 8, −12); **OC** = **OA** + **AC** = (6, 7, −8) ✓.

9(c) [3/4] — Partial — M1 A1 DM1 A0

$|OP|^2 = (2+2\lambda)^2 + (-1+4\lambda)^2 + (4-6\lambda)^2 = 56\lambda^2 - 48\lambda + 21 = 49$. Quadratic $14\lambda^2 - 12\lambda - 7 = 0 \Rightarrow \lambda = (6 \pm \sqrt{134})/14$ ✓. Substituted the (+) root and reported **OP** = $((20 + \sqrt{134})/7, (5 + 2\sqrt{134})/7, (10 - 3\sqrt{134})/7)$. The (−) root was identified algebraically but its corresponding position vector was not written out — the MS expects BOTH explicit P-coordinates. **Mark cost: −1.**

Q10 Polynomial Factorisation & Argand Loci — 10/13 · 76.9%

10(a) [3/3] — Full marks — M1 A1 A1

Computed powers: $(1+2i)^2 = -3+4i$, $(1+2i)^3 = -11-2i$, $(1+2i)^4 = -7-24i$. Substituted into $p(z) = z^4 - 2z^3 + 6z^2 - 2z + 5$: real parts (−7+22−18−2+5) = 0; imaginary parts (−24+4+24−4) = 0. $p(1+2i) = 0 \Rightarrow (z - (1+2i))$ is a factor ✓.

10(b) [1/1] Full marks B1	Conjugate root **1 − 2i** ✓ — coefficients of p(z) are real, so the Conjugate Root Theorem applies (the prerequisite Q2(a) overlooked).
10(c) [3/3] Full marks M1 A1 A1	Quadratic with roots **1 ± 2i**: **$z^2 - 2z + 5$**. Polynomial long division (shown explicitly): **$p(z) \div (z^2 - 2z + 5) = z^2 + 1$**, remainder 0. Final: **$p(z) = (z^2 + 1)(z^2 - 2z + 5)$** ✓.
10(d) [3/6] Partial M1 A1 M1 A0 DM0 A0	Drew both circles correctly: centres **(1, 2)** and **(1, −2)**, both radius 1 (M1, A1, M1). The geometric punchline was missed: distance between centres is **|4i| = 4**; sum of radii is **2**. Since **4 > 2**, the two disks do not intersect and the set of **z** satisfying BOTH constraints is the **empty set**. Candidate wrote **'−3 < |z−1| < 3'** — a non-empty interval, and one whose lower bound (a negative modulus) is automatically satisfied. **Three accuracy/deduction marks lost. Mark cost: −3.** See Targeted Improvement, Priority 2.

PERFORMANCE OVERVIEW

Holistic synthesis of the candidate's performance on this paper

TAQBIR has produced a strong A* performance on this Pure Mathematics 3 mock, scoring **67 out of 75 (89.3%)** on Paper 3 — placing him in the **A* / Excellent** band per Neuratech's 85+% boundary. **Six of the ten questions were answered with full marks** (Q1, Q3, Q4, Q6, Q7, Q8), demonstrating comprehensive command of logarithmic equations, trigonometric identity proof, integration via substitution, modulus inequalities and Argand loci, iterative numerical methods, and partial fractions with mixed-form integration. Two further questions were near-perfect (Q9 at 88.9%, Q2 at 80.0%). The eight marks lost cluster around **two specific cognitive failure modes**: (i) over-running an algebraic procedure when the geometry already supplies the answer (Q5b, Q10d), and (ii) stopping one step short of the question's plurality demands (Q2a missing 'real coefficients' justification, Q9c writing only one of two position vectors). Both are correctable with explicit pre-exam habits — see the Priority 1–5 block on the next page.

The procedural surface of the paper — differentiation, integration, polynomial division, complex-number arithmetic, vector setup — is fully under control. The candidate consistently preserves exact forms (**$5/12$, $\pi/3 + \sqrt{3}/2$, $23\pi/40 + (1/5)\ln(2/9)$, $(6 \pm \sqrt{134})/14$**) before ever touching a decimal, which is the single biggest defence against accuracy-mark loss at A* level. The growth edge for the live 9709/32 paper is the **conceptual punchline**: when an equation reduces to a form that admits an obvious geometric reading ($x^2+y^2 = 0$ over reals → only origin; non-overlapping disks → empty intersection), the candidate must **stop calculating and reason**.

✓ STRENGTHS DEMONSTRATED

Specific moves that consistently earned marks

Logarithmic Algebra — Power-Rule Discipline (Q1) — 4/4 FULL

Took logs cleanly on both sides of **$3 \cdot 2^{(x+1)} = 4 \cdot 3^{(2x-3)}$**, expanded with full power-rule rigour, collected x-terms without sign-error, and reported **x = 2.46 (3 s.f.)** in algebraically equivalent form to the MS — programmatically verified to **x = 2.46085**. Three significant figures honoured per the question's accuracy demand.

Trig Identity Proof & Hence-Integration (Q3) — 6/6 FULL

Cascaded **$\sin 4x = 2 \sin 2x \cos 2x$**, then both **$\sin 2x = 2 \sin x \cos x$** and **$\cos 2x = 2\cos^2 x - 1$**, to land on **$2\cos^3 x - \cos x$** in three steps. For the integral, used **$u = \sin x$** on the original sin 4x integrand to reach **$\int(1 - 2u^2)\,du$** — same antiderivative as the MS. Final value **5/12**. Two equivalent routes shown — an examiner-pleasing flexibility.

Modulus & Argand Mastery — Sign-Flip Discipline (Q4) — 7/7 FULL

Both critical-value branches handled in parallel for **$|2x+5| < 3-x$** — including the trickier **$-(2x+5) < 3-x \Rightarrow x > -8$** branch where most candidates lose the inequality direction. For the Argand part, restated **$|z+2| = 3$** as a circle centred at (−2,0) of radius 3, drew the **Re(z) = −1** line, and shaded the intersection cleanly. Algebraic locus → geometric region translation textbook.

Implicit Differentiation — Product-Rule on Mixed Terms (Q5a) — 4/4 FULL

The differentiation of **$3xy^2$** is the canonical trap on this question (candidates routinely forget the product rule). The student handled it cleanly: **$d/dx(3xy^2) = 3(y^2 + 2xy \cdot dy/dx)$**. Final dy/dx form simplified to **$-(x^2+y^2)/(2xy - y^2)$** — identical to MS up to factor cancellation.

Iterative Methods — Full Three-Phase Rigour (Q7)

8/8 FULL

All three sub-parts executed with examiner-grade discipline: algebraic rearrangement (a), bracketing via sign-change (b) using auxiliary **f(α) = α − (7−2α)^(1/3)**, and seven explicit iterations to **4 d.p.** until convergence to **α = 1.57 (2 d.p.)**. The single most procedurally complete question on the paper.

Partial Fractions + Mixed-Form Integration (Q8)

8/8 FULL

The hardest sub-part on the paper to integrate cleanly — three different antiderivative forms **(ln, ln, arctan)** on a single integrand. Final answer reported in equivalent form **23π/40 + (1/5) ln(2/9)**, which is a different but algebraically identical expression to the MS's **(1/5) ln 2 − (2/5) ln 3 + 23π/40**. CAIE positive-marking applied; full credit awarded.

Surd-Form Discipline Across the Paper

CROSS-CUTTING

Throughout the paper, exact forms were preserved (**5/12, π/3 + √3/2, 23π/40 + (1/5) ln(2/9), (6 ± √134)/14, ∛3**) before the final rounding. This is the single most reliable defence against accuracy-mark loss to premature decimal conversion at A* level — and it is already a habit. Carry it forward into the live 9709/32 paper unchanged.

! AREAS OF WEAKNESS — REQUIRING ATTENTION

Eight marks lost — diagnostic of two cognitive patterns

Algebraic Drift Past the Geometric Punchline — Q5(b)

−3 marks

The single largest mark loss on the paper. Setting **dy/dx = 0** reduced correctly to **$x^2 + y^2 = 0$** (M1 earned). At that point, the geometric reading is immediate: over the reals, $x^2+y^2=0$ forces both x=0 AND y=0 — there is one candidate point only (the origin), and (0,0) is not on the curve, so no stationary points exist. Instead the candidate manipulated **$y^2 = -x^2$** as if it had real solutions and arrived at the spurious **(∛3, ∛3)** — a point that does lie on the curve but where dy/dx = −2, not 0. Programmatic verification confirmed both facts. **Mark cost: 2 accuracy marks + 1 method/conclusion mark = −3.**

Geometry Missed at the Final Hurdle — Q10(d)

−3 marks

Both circles drawn correctly (centres (1, ±2), radius 1) — three procedural marks earned. The remaining three marks all hung on a single observation: distance between centres = 4, sum of radii = 2, so 4 > 2 means the disks do not overlap and the constraint set is the **empty set**. Candidate wrote **'−3 < |z−1| < 3'** instead — a non-empty interval (and one with a meaningless lower bound, since |·| ≥ 0 always). The drawing was right; the conclusion was guessed.

Theorem Without Its Precondition — Q2(a)

−1 mark

The Conjugate Root Theorem applies **only when the polynomial has real coefficients**. Candidate wrote the conclusion ('complex root always has its conjugate') but not the precondition ('because a, b are real'). The CAIE Common Mistakes section for this exact question explicitly flags this omission. Notably, in Q10(b) the same student correctly identified **1−2i** as a root of a real-coefficient polynomial — so the underlying knowledge is in place; it just isn't being verbalised when 'explain why' is asked.

Plurality Stopped One Step Short — Q9(c)

−1 mark

Quadratic in λ correctly solved: **λ = (6 ± √134)/14** — both values written. The (+) root was substituted to give an explicit OP; the (−) root was left implicit. The MS expects **both** position vectors written out. A 60-second extension of the work already done would have closed this.

Pattern Diagnosis — Two Failure Modes, Both Trainable

CROSS-CUTTING

The eight marks lost are not eight independent slips — they are **two cognitive patterns** repeating: (1) **not pausing at the geometric/conceptual moment** (Q5b, Q10d, costing 6 marks); (2) **not closing the loop on plurality and prerequisites** (Q9c, Q2a, costing 2 marks). Targeting these two habits — not ten different topics — is the highest-leverage intervention before the live paper.

↑ TARGETED IMPROVEMENT ADVICE

Five priorities ordered by expected mark uplift

PRIORITY 1

When an Equation Reduces, Read the Geometry Before Continuing

For any equation that arises from **setting a derivative or modulus condition to zero**, pause and ask: *"What does this say about the variables in the real plane?"* **$x^2+y^2=0$ means x=y=0 only. |z|=k means a circle. Two non-intersecting disks means an empty intersection.** Make this a 5-second mandatory pause before continuing the algebra. Implementation: on the next ten practice questions, write a single sentence in the margin describing the geometry of the equation before solving. Expected uplift on the live paper: **3–5 marks.**

PRIORITY 2

For 'Find the Set of Values' — The Set May Be Empty

When CAIE asks for a **set** of values, the answer can be (i) a single value, (ii) multiple discrete values, (iii) an interval, or **(iv) the empty set**. The candidate's instinct in Q10(d) was to assume the answer must be an interval. Train the alternative: **before answering, verify that at least one element of the set exists.** If the geometry says no, write **"empty set / ∅ / no solutions"** explicitly. Expected uplift: **2–4 marks.**

PRIORITY 3

Verbalise the Precondition When Quoting a Theorem

Q2(a) was a 'state why' question — CAIE wants the **justification**, not the conclusion. Drill: every time a theorem is invoked (Conjugate Root, IVT, Mean Value, Factor, Remainder), open with **"Because [precondition is met]…"**. For Conjugate Root: 'Because a, b are real, complex roots come in conjugate pairs, so z_1^* is also a root.' One additional sentence, one mark recovered every time. Expected uplift: **1–2 marks per paper.**

PRIORITY 4

When the Quadratic Gives Two Roots, Write Both Answers

Q9(c) lost a mark because only one of two valid position vectors was substituted out. When the working produces $\lambda = a \pm b$ (or $x = a \pm b$), CAIE expects both downstream consequences. Habit: as soon as a ± appears, write **"two cases:"** in the margin and number them. Then complete each. The 60 extra seconds buys an A1 mark every time. Expected uplift: **1 mark per paper.**

PRIORITY 5

In Real-Variable Algebra, Refuse to Square-Root a Negative

Q5(b) drift began with **'$y^2 = -x^2$, so $y = \sqrt{(-x^2)}$'** — the moment fictitious solutions enter the working. Train an automatic stop: **over the reals, $y^2 = -x^2$ is satisfied only by (0,0)**; nothing else needs to be computed. The same alarm bell applies to **√(negative discriminant)**, **$\cos\theta > 1$**, and **$|z| < 0$**. Each is a redirect to "no real solution" — never a manipulation. Expected uplift: **2–3 marks (varies by paper).**

↻ CLOSING ASSESSMENT

Teacher's comment, performance trend, next steps, and certification

" TEACHER'S COMMENT

TAQBIR has delivered a strong A*-level performance — **67/75 (89.3%)** — with six of the ten questions returned at full marks. The procedural surface of A Level Pure Maths is fully under his control: implicit differentiation through a product-rule trap (Q5a), partial-fraction decomposition with three integration forms (Q8), seven-step iterative convergence to 2 d.p. (Q7c), and complex-number arithmetic on a quartic polynomial (Q10a) all returned without algebraic slip. The eight marks lost share a single shape: at the **geometric or conceptual punchline**, the candidate keeps calculating instead of pausing to read what the algebra is telling him. Q5(b) and Q10(d) were both sketched correctly and concluded incorrectly — pacing-and-reflection gaps, not knowledge gaps. Drill the five priorities above for two weeks and the same paper would return 73–75/75. The trend from Set 1 (Mechanics, A*) to Set 2 (Pure, A*) confirms grade-band stability across the syllabus; carry this discipline into Set 3 and the live 9709/32 paper unchanged.

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PERFORMANCE TREND TRACKER

PREVIOUS · SET 1	SET 2 · THIS PAPER (CURRENT)	NEXT TARGET · SET 3
Paper 4 Mechanics	Paper 3 Pure Maths	Stretch Mock
A*	A*	75/75
96.0% · 48/50	89.3% · 67/75	100% · perfect-paper goal

NEXT STEPS

1

Geometry-First Drill (10 questions)

Pick ten past-paper sub-parts where an equation reduces to a geometrically obvious form. Before solving, write one sentence describing the geometry. This rewires the Q5b/Q10d pattern at the cost of ~30 minutes of practice.

2

Set 3 — Same Paper, Higher Stakes

Sit Set 3 of 5 on Paper 3 (9709/32) under timed conditions. Target: 75/75. Specifically watch the two failure modes flagged in Priority 1 and 2; the remaining content is already at A*.

3

Live 9709/32 Paper Readiness

After Sets 3, 4 and 5, transition to the live 9709/32 sequence (June or November session). Maintain surd-form discipline and exact-form preservation as the default — both are already strong.

✓ **REPORT VERIFIED & STANDARDISED**

Reference: **NT-9709-32-S2-8588** · Issued 25 April 2026 · Mock Set 2 of 5

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