Sec 2 Mathematics Success Checklist

A clean, parent-friendly checklist for Sec 2 Maths (G2/G3) — built for strong fundamentals and A-Math readiness.

Start here: 5-minute readiness scan

Tick what is already true (the blanks become your next targets):
☐ Factorise common patterns quickly (common factor, two brackets).
☐ Solve linear equations (including fractions) without slipping steps.
☐ Interpret linear graphs (gradient + intercept) and use them to solve problems.
☐ Use Pythagoras confidently with clear working.

Why Sec 2 matters

Sec 2 is where algebra and graphs start to compound. If foundations are stable now, Sec 3/4 becomes manageable — and A-Math feels far less “shocking”.

Why tuition with BukitTimahTutor.com

• 3-pax classes for fast feedback and real accountability.
• MOE/SEAB aligned across the national strands and assessment style.
• Diagnostic → targeted drills + timed practice + error-log review.

Priority checklist (high impact topics)

Algebra & Quadratics ☐ Expand & factorise confidently (incl. quadratic expressions). ☐ Solve equations/inequalities and show working clearly. ☐ Model word problems into equations (ratio, speed, cost).	Graphs & Functions Thinking ☐ Linear graphs: gradient as “rate of change”; interpret context. ☐ Simultaneous linear equations (algebraic + graphical). ☐ For G3: quadratic graphs and links to equations.
Geometry, Trig & Mensuration ☐ Similarity/congruence; scale drawings/enlargement. ☐ Pythagoras + right-triangle reasoning. ☐ For G3: trig ratios (sin, cos, tan) in right triangles.	Statistics & Probability ☐ Histograms / stem-and-leaf: read accurately, compare fairly. ☐ Mean/median (incl. grouped mean) + explain choice. ☐ Single-event probability; list outcomes neatly.

Alpha habits (simple, powerful) 1) Error-log. 2) Weekly spaced review. 3) Mixed topical timed sets.

Sec 2 syllabus at a glance (MOE Full SBB: G2 & G3)

Schools may sequence topics differently, but these are the common Sec 2 building blocks. Use this to spot gaps and plan revision.

G2 (build security)	G3 (stretch & accelerate)
☐ Direct & inverse proportion; maps/scale context ☐ Algebra: simplify, expand, factorise (incl. quadratic forms) ☐ Linear functions & graphs; gradient; linear equations (incl. fractions) ☐ Inequalities; simultaneous linear equations (algebra + graph) ☐ Geometry: polygons/quadrilaterals, similarity/congruence, Pythagoras ☐ Mensuration: pyramid, cone, sphere ☐ Statistics: dot/histogram/stem-and-leaf; mean/median/mode; grouped mean ☐ Probability: single events + listing outcomes	☐ All G2 core + deeper algebraic manipulation ☐ Algebraic fractions (including +/− with linear/quadratic denominators) ☐ Quadratic functions & graphs (max/min, symmetry) ☐ Quadratic equations by factorisation; quadratic inequalities ☐ Trigonometric ratios (sin, cos, tan) in right-angled triangles ☐ More multi-step, mixed-topic problem solving

How to access the official MOE/SEAB information (fast)

1) MOE syllabus PDFs (Full SBB): G2 & G3 Mathematics Syllabuses (2020)
2) SEAB exam syllabus (E-Math): O-Level Mathematics (4052) — 2026
3) SEAB exam syllabus (A-Math): O-Level Additional Mathematics (4049) — 2026
4) SEAB index (specimen papers + other subjects/years): 2026 O-Level syllabuses list

A simple 6-week improvement plan

Week 1: Diagnose → fix the top 3 error patterns (often factorisation, algebra steps, graphs).
Weeks 2–3: Daily micro-drills (10–20 min) + 1 mixed set weekly.
Weeks 4–5: Mixed topical timed practice (speed + method marks).
Week 6: Mock test → review → retest your weakest 2 topics.

We want the best for our Sec 2 Maths students
• Learn from first principles (not memorised tricks).
• Build confidence by mastering core techniques before rushing.
• Train exam habits: clear working, checking, and time control.
• Keep doors open for Sec 3 choices (G2↔G3 mobility and A-Math readiness).

Need a personalised plan? WhatsApp +65 8823 1234 (3 seats per class).

Sources used: MOE Full SBB Mathematics syllabuses (G2/G3) and SEAB O-Level Mathematics (4052) & Additional Mathematics (4049) syllabuses.