The Math Library

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The Math Library

Five reference docs, five Fundamentals, one operating discipline. Every number an operator can run sits in one of these five, and each one is filed under the Fundamental it serves. Search any formula and it lands; start here and you know where to look before you search.

Cost side — what the operation spends. F&B Formulas covers recipe cost, plate cost, food and pour cost, usage variance, and menu engineering. Labor Math Formulas covers labor cost percentage, burdened labor, productivity per hour, overtime, and prime cost. Open these when the question is what something costs to produce or serve.

Capacity side — what the room can carry. Core Formulas covers occupancy cost, sales per square foot, revenue per available seat hour, break-even for the operation, and payback on any investment. Open this when the question is whether a lease, a location, or a capital spend should happen at all.

Value side — what a Guest is worth. Guest Economics Formulas covers the value of a visit, the cost of a bad visit, revenue lost to slow turns and empty seats, the cost of cast turnover, and what recovery earns. Open this when the question is what the experience is worth or what a failure costs.

Cash side — whether the business can carry itself. Finance Math Formulas covers operating cash flow, debt service coverage, liquidity ratios, days cash on hand, and the working capital cycle. Open this when the question is whether the operation can pay what it owes, this quarter and the next.

Start with the question, not the formula. What does this cost? Open the cost docs. Can the room carry it? Open Core Formulas. What is the Guest worth? Open Guest Economics. Can the business pay for it? Open Finance Math. The formula is the last step, not the first.

The five docs:

- F&B Formulas — Performance — recipe cost, plate cost, food cost, pour cost, usage, menu engineering, break-even for the plate
- Labor Math Formulas — People and Performance — labor cost, burdened labor, productivity, overtime, payroll burden, prime cost
- Core Formulas — Perspective and Performance — occupancy, sales per square foot, RevPASH, capacity, break-even for the operation, payback, ROI
- Guest Economics Formulas — Product — value of a visit, cost of a bad visit, lost revenue, recovery value, turnover cost, referral value
- Finance Math Formulas — Profit — cash flow, debt service, liquidity, days cash on hand, working capital, owner draw