

Build Lightning-fast Accuracy for Consulting & Finance Interviews



TABLE OF CONTENT

1. Why Case Math Is Critical in Interviews
2. Core Math Skills Every Candidate Needs
3. Percentages, Ratios, and Growth Rates
4. Profitability Calculations & Breakevens
5. Market Sizing Math in Action
6. Pricing & Revenue Modeling
7. Cost Structures & Margin Analysis
8. ROI & Investment Calculations
9. Capacity & Utilization Math
10. Common Shortcuts for Quick Mental Math
11. 20 Practice Questions – Basic Math
12. 30 Practice Questions – Profit & Revenue
13. 30 Practice Questions – Market & Pricing
14. 20 Advanced Questions – Investment & Capacity
15. Master Case Math With RoleEdge

Why Case Math Is Critical in Interviews

Upload your resume (PDF/DOC)

SUMMARY

78

out of 100

Consulting and finance interviews demand structured thinking + numerical accuracy. Even if your structure is brilliant, sloppy math can ruin your impression.

Recruiters want to see:

- Comfort with numbers under time pressure.
- Ability to approximate without paralysis.
- Logical step-by-step explanation.

👉 **Exercise: Think of the last time you froze on a math question. What went wrong—panic, accuracy, or communication?**

Core Math Skills Every Candidate Need



Before solving complex cases, master the basics:

- Multiplication & division shortcuts.
- Ratios and proportions.
- Percentage increase/decrease.
- Compounding growth.
- Weighted averages.

👉 **Quick Check: What's 25% of 480? (Answer: 120). Did you solve mentally or write it down?**

Profitability Calculations & Breakevens

- Profit = Revenue – Costs.
- Breakeven = Fixed Costs ÷ Contribution Margin.
- Example:
- Fixed Costs = ₹50 Cr.
- Selling Price = ₹500.
- Variable Cost = ₹300.
- Contribution Margin = ₹200.
- BEP Units = 50 Cr ÷ 200 = 25 lakh units.
- 🖱️ **Exercise:** Calculate breakeven for a SaaS firm with \$2M fixed costs and \$40 contribution margin.

Percentages, Ratios, and Growth Rates



Examples:

- A company grows revenue from ₹100 Cr to ₹120 Cr. Growth rate? (20%).
 - If profits are ₹20 Cr on ₹100 Cr revenue, margin = 20%.
 - Ratio of fixed to variable cost = 2:3.
- 👉 Exercise: A firm's revenue grows from \$200M to \$260M in 2 years. What's CAGR? (~14%).

Pricing & Revenue Modeling

Pricing strategy often needs math:

- If price $\uparrow$ 10% and demand $\downarrow$ 5%, net revenue $\uparrow$ ~4.5%.
- Bundling: 3 items at ₹99 vs ₹40 each changes margin.

👉 **Exercise:** A firm sells 10,000 units @ ₹500 each, cost = ₹300. Revenue? ₹50L. Profit? ₹20L.

ROI & Investment Calculations

ROI = (Net Gain ÷ Investment).

NPV/IRR used in finance cases.

Example:

- Invest ₹100 Cr.
- Gain ₹140 Cr in 2 years.
- ROI = 40%. CAGR ~18%.

👉 **Exercise: A startup invests \$2M, exits at \$3.5M in 3 years. CAGR? (~21%).**



Capacity & Utilization Math

Example: A factory capacity = 100,000 units/month. Running at 75% → produces 75,000.

✦ Exercise: A call center has 500 agents, each handles 20 calls/day. Utilization is 80%. How many calls/day? (8,000).



Common Shortcuts for Quick Mental Math

- % of multiples of 10 (12% of 250 = 25 + 5 = 30).
- CAGR approx = $(\text{End}/\text{Start})^{(1/n)} - 1$.
- Rule of 72 for doubling time: $72 \div \text{growth rate}$.

👉 Exercise: Estimate doubling time at 12% CAGR. (~6 years).



20 Practice Questions – Basic Math

- **Examples:**
- If costs $\uparrow$ 8% on ₹500 Cr, new cost?
- Revenue grows 25% from \$80M. New revenue?
- Ratio of salesmen: 4:5. If total 180, each?
- ... (20 total included in workbook).



60 Practice Questions – Profit/Market/Pricing

- 30 Profit & Revenue (e.g., breakevens, margins).
- 30 Market & Pricing (elasticity, bundling, demand shifts).

👉 **Example: A SaaS startup adds 100 clients at \$1,000/year. Costs \$50,000. Profit margin?**
 $(100k - 50k) / 100k = 50\%$.

20 Advanced Questions

– Investment & Capacity

- A PE firm invests \$50M, exits at \$120M in 5 years. CAGR?
- A plant operates at 70% capacity. How many units if max = 1.2M?
- An airline sells 80% of 200 seats per flight, 40 flights/day. Annual passengers?



**“Want a resume that
gets interviews and a
LinkedIn that attracts
recruiters?
Book a RoleEdge
Branding Session
today”**

Email:

info@roleedge.com

Website:

www.roleedge.com

Book a FREE 1:1 Consultation

<https://roleedge.zohobookings.in/#/discovery-call>

