

Case interviews

Fast Maths cheat sheet

Case maths formulas

Revenue = Volume x Price

Cost = Fixed cost + Variable cost

Profit = Revenue - Cost

Profit margin (aka profitability) = Profit / Revenue

Return on investment (ROI) = Annual profit / Initial investment

Breakeven (aka Payback period) = Initial investment / Annual profit

1. Round numbers

- Round by + / - 10%
- Round UP then DOWN

2. Handling large numbers

- Use labels (k, m, b)
- Use the Scientific notation

3. Factoring

- Decompose in simple numbers
 - $5 = 10 / 2$
 - $7.5 = 10 \times 3 / 4$
 - $15 = 10 \times 3 / 2$
 - $25 = 100 / 4$
 - $50 = 100 / 2$
 - $75 = 100 \times 3 / 4$
- Factor numerator / denominator
 - E.g. $300 / 4 = 3 \times 100 / 4$

4. Expanding

- With additions
 - E.g. $68 \times 35 = 68 \times (10 + 25)$
- With subtractions
 - E.g. $68 \times 35 = (70 - 2) \times 35$

5. Growth rate

- Multiply growth rates
 - E.g. 10% then 20% growth
 $= (1.1 \times 1.2) - 1$
- Estimate compound growth
 - E.g. 7% growth for 5 years
 $= 5 \times 7\%$



More than 80% success rate