PRACTICAL EVERYDAY MATHEMATICS • MODULE 03

Monthly Budget & Interest

ਮਹੀਨਾਵਾਰ ਬਜਟ, ਬਚਤ (Savings) ਅਤੇ ਬਿਆਜ (Interest) ਦਾ ਹਿਸਾਬ-ਕਿਤਾਬ

1. The 50 / 30 / 20 Budgeting Rule (ਬਜਟ ਬਣਾਉਣ ਦਾ ਸੁਨਹਿਰੀ ਨਿਯਮ)

Managing money effectively starts with a simple rule. Split your net monthly income into three key categories:

Category	Percentage	Examples (ਉਦਾਹਰਣਾਂ)
Needs (ਜ਼ਰੂਰੀ ਖਰਚੇ)	50%	Rent, Groceries, Electricity Bills, School Fees
Wants (ਇੱਛਾਵਾਂ)	30%	Dining Out, Movies, Shopping, Travel
Savings & Investments (ਬਚਤ)	20%	Emergency Fund, FD, Mutual Funds, Debt Payment

MONTHLY SAVINGS CALCULATION

`Monthly Savings = Income − Total Expenses`

2. Understanding Simple & Compound Interest

Scenario A: Simple Interest (ਸਧਾਰਨ ਵਿਆਜ)

Simple Interest (SI) is calculated only on the initial principal amount borrowed or invested.

SIMPLE INTEREST FORMULA

$$SI = (P \times R \times T) / 100$$

Example: You deposit **₹50,000 (P)** in a fixed deposit (FD) at **7% per annum (R)** for **3 years (T)**.

1. **Step 1: Calculate Total Interest**
   $SI = (50000 \times 7 \times 3) / 100 = ₹10,500$
2. **Step 2: Calculate Total Amount Received**
   $\text{Total Amount} = \text{Principal} + SI = ₹50,000 + ₹10,500 = ₹60,500$

Scenario B: Compound Interest (ਚੱਕਰਵਰਧੀ ਵਿਆਜ)

Compound Interest (CI) is "interest on interest". It causes your money to grow much faster over time.

COMPOUND INTEREST FORMULA

$$\text{Amount} = P \times (1 + R/100)^T$$

Example: Investing ₹50,000 at 7% compounded annually for 3 years:

- **Year 1:** Interest on ₹50,000 = ₹3,500. New Total = ₹53,500
- **Year 2:** Interest on ₹53,500 = ₹3,745. New Total = ₹57,245
- **Year 3:** Interest on ₹57,245 = ₹4,007. Final Total = **₹61,252**

> 💡 **Key takeaway:** Compound Interest gave you **₹752 MORE** than Simple Interest over 3 years on the same principal!

3. Practical Practice Exercises (ਅਭਿਆਸ ਲਈ ਪ੍ਰਸ਼ਨ)

Q1 **Applying 50/30/20 Rule:** Gurpreet's monthly salary is ₹40,000. How much money should he ideally allocate to Needs, Wants, and Savings?

Answer: Needs (50%) = ₹20,000 | Wants (30%) = ₹12,000 | Savings (20%) = ₹8,000

Q2 **Personal Loan Interest:** A person takes a personal loan of ₹1,000,000 at 10% per annum Simple Interest for 2 years. Calculate the total interest paid and total repayment amount.

Answer: Interest = (100000 × 10 × 2) / 100 = ₹20,000 | Total Repayment = ₹1,20,000

Q3 **Emergency Fund Target:** If your essential monthly expenses (Needs) are ₹25,000, how much money should you save to build a 6-month emergency fund?

Answer: 6 Months Emergency Fund = ₹25,000 × 6 = ₹1,50,000