

Subscripted Variables,
Summation, Product and
Banks

Subscripted Variables

- Used to indicate a specific entry in a list of things of a similar nature
- Used to indicate some specific thing derived from a list of similar things
- Mainly used in formulas and certain sorts of calculations

Examples of Subscripted Variables

X_i

Temp_4

T_{max}

Y_{ave}

V_{min}

Summation Notation

- Used in formulas
- Indicates adding up all the entries listed
- The subscripted part of the variable is the *index* of the variable
- Looks like this: $\sum_{i=1}^{25} 1/x_i^2$ or maybe this: $\sum_{i=1to25} 1/x_i^2$
- Both mean: $1/x_1^2 + 1/x_2^2 + 1/x_3^2 + \dots + 1/x_{24}^2 + 1/x_{25}^2$

Product

- Functions like summation notation
- Indicates multiplying all the entries listed

• Looks like this: $\prod_{i=1}^n x_i$ Or this: $\prod_{i=1 \text{ to } 25} x_i$

• Both mean: $x_1 * x_2 * x_3 \dots x_{n-1} * x_n$

Sum and Product

Both the sum and product notations are often used in more complicated formulae, such as:

$$\text{Variance} = (1 / (n - 1)) * \sum_{i=1}^n (x_i - x_{ave})^2$$

$$\pi/2 = \prod_{n=1}^{\infty} ((2n / (2n - 1)) * (2n / (2n + 1)))$$

Banks and Banking

Top Reasons to Use a Bank or Credit Union

1. Automatically pay bills
2. Keep your cash safe
3. Get your wages
4. Statements
5. Debt free living
6. Mobile banking
7. Receive benefits
8. Shop online
9. Safe from thieves

Banks and Banking Points to Consider

- Location
- Availability of Automatic
Teller Machines
- Bank Hours
- Customer Service
- Online Banking

Banks and Banking

Services to Consider

Credit cards

Lines of credit

Personal, business and auto
loans

Mortgages

Online or mobile banking

Automatic bill pay

International banking

Health savings accounts

Financial planning

Investment management

Health, home and car
insurance

Retirement programs

Banks and Banking

Fees to Consider

- Check Fees
- Balance Inquiry Fees
- Automatic Teller Fees
- Overdraft Fees

Banks vs. Credit Unions

Banks

- Owned by a group of investors
- For Profit
- May offer greater accessibility and more services
- Federal Deposit Insurance Corporation

Credit Unions

- Controlled and owned by members
- Not for profit
- May have lower cost for services and higher interest rate on savings
- National Credit Union Administration