1. Introduction to Zoho Analytics

Zoho Analytics is a self-service business intelligence (BI) and data analytics platform that allows users to analyze data, create visualizations, and generate reports and dashboards — all without needing to write extensive code.

Key Features

- **Data import**: Connect and import from files, databases, and cloud apps (Excel, Google Sheets, Zoho CRM, etc.)
- **Data blending**: Combine data from multiple sources.
- **Visualization**: Drag-and-drop charts, pivot tables, dashboards.
- **AI Insights**: "Zia Insights" gives natural-language summaries of data.
- **Collaboration**: Share dashboards securely with teammates.

Free Plan Overview

Zoho Analytics offers a Free Plan ideal for individuals and small teams.

Feature	Free Plan
Users	2 users
Data rows	Up to 10,000 rows
Data sources	Files, feeds, and web URLs
Storage	100 MB
Dashboards	Unlimited
Reports	Unlimited
Sharing	Limited (within same workspace)

Sign up here: https://www.zoho.com/analytics/

2. Core Concepts in Zoho Analytics

Let's break down the theory behind BI and Zoho Analytics in simple terms.

2.1 Workspace

A workspace is like a project folder.
It contains your data tables, reports, and dashboards.

Analogy: Think of it like a database schema.

2.2 Data Tables

The base component that holds your imported data (from Excel, CSV, Google Sheets, etc.).

- Zoho auto-detects data types (text, number, date).
- You can create relationships (joins) between tables.

Example:
You might have:

- Sales table (OrderID, Date, Amount)
- Customers table (CustomerID, Region)

You can join them via CustomerID.

2.3 Reports

Reports are visual representations of data (charts, pivot tables, summaries).

Types include:

- Bar chart, Line chart, Pie chart
- Pivot table
- Summary view
- KPI widgets

Example:
Create a bar chart showing Total Sales by Region.

2.4 Dashboards

Dashboards combine multiple reports into one visual page.

You can add:

- Charts
- KPIs
- Filters
- Text boxes
- Images

Example:
A Sales Dashboard with:

- Total Revenue KPI
- Sales by Region Chart
- Top 10 Customers Table

2.5 Formulas and Aggregations

Similar to Excel formulas.

- You can create Calculated Columns or Aggregate Formulas.
- Functions: sum(), avg(), count(), datediff(), if(), etc.

Example:
To calculate profit margin:
(Sales - Cost) / Sales * 100

2.6 Data Blending and Relationships

You can join tables (like SQL joins) to analyze cross-source data.

Example:
Join Sales with Marketing Spend to find ROI.

3. Hands-On Example Using Free Online Tools

We'll use Google Sheets (for data) + Zoho Analytics Free Plan (for BI visualization).

Step 1: Create Sample Data in Google Sheets

Create a Google Sheet with this data and name it sales_data.

Date	Region	Product	Units Sold	Unit Price	Cost per Unit

Date	Region	Product	Units Sold	Unit Price	Cost per Unit
2025-01-01	North	Laptop	5	1000	800
2025-01-02	South	Tablet	8	600	400
2025-01-03	East	Laptop	3	1000	800
2025-01-04	West	Phone	10	700	500
2025-01-05	North	Tablet	4	600	400

Save it as a public Google Sheet (or download as .csv).

Step 2: Import Data into Zoho Analytics

1. Sign in to Zoho Analytics Free Plan.
2. Click "Create Workspace" → name it Sales Analysis.
3. Choose Import Your Data → Select Google Sheets or CSV File.
4. Upload your data.

Step 3: Explore the Data

- Zoho automatically infers columns (e.g., Date, Region, Product, etc.)
- Check data types
- Rename columns if needed
- Create new calculated columns

Example formula for Profit:
"Units Sold" * ("Unit Price" - "Cost per Unit")

Step 4: Create Reports

1. Go to Reports → New Report → Chart View.
2. Select:
    - X-Axis: Region
    - Y-Axis: Sum of Profit
3. Choose Bar Chart → Save as Profit by Region.

Other useful reports:

- Sales Trend: Date vs Total Sales
- Top Products: Product vs Total Profit

Step 5: Create Dashboard

1. Click New Dashboard → name it Sales Overview.
2. Drag and drop:
    - Profit by Region chart
    - Sales Trend chart
    - KPI Widget: Total Sales (sum(Units Sold * Unit Price))
3. Add filter for Region (optional).

You've now built a complete BI dashboard — 100% free.

4. Tips and Best Practices

Area	Tip
Data Cleaning	Always check for missing or duplicate rows before importing.
Naming	Use clear names for columns and reports.
Filters	Add region/product filters for interactivity.
Scheduling	In paid plans, automate refresh; in free plan, manually refresh data.
Security	Limit sharing to trusted users (even in free plan).

5. Alternative Free Tools for Practice

If you want to learn BI without limits on data size:

- **Google Looker Studio (Free)** – integrates with Sheets, BigQuery.
- **Microsoft Power BI Desktop (Free)** – offline app.
- **Metabase (Open Source)** – free to host locally.
- **Tableau Public** – free, but data is public.

You can combine Google Sheets + Looker Studio for a completely free practice setup.

6. Summary

Concept	Description

Concept	Description
Zoho Analytics	Cloud BI & analytics tool
Free Plan	Up to 2 users, 10k rows
Core Components	Workspaces, Data Tables, Reports, Dashboards
Skills Gained	Data import, transformation, visualization
Hands-on	Built Sales Dashboard using Google Sheets data

2. Creating "Sales Trend: Date vs Total Sales" in Zoho Analytics

Step 1: Open Your Data Table

Go to your workspace → select your imported table (e.g., Sales_Data).

Ensure columns:

- Date (data type: Date)
- Units Sold (Number)
- Unit Price (Number)

Step 2: Create a Formula Column (if needed)

If you don't already have a "Total Sales" column:

Menu Path:
Data Table → Add → Formula Column

Formula:
"Units Sold" * "Unit Price"

Name it: Total Sales

Step 3: Create the Chart

Go to Reports → New Report → Chart View

In the Chart Designer, drag:

- Date → X-Axis
- Total Sales → Y-Axis (set to Sum)

Choose Line Chart as chart type (best for trends).

Step 4: Format the Chart

In the right panel, set:

- Date Aggregation: Monthly (optional)
- Y-Axis Title: Total Sales
- X-Axis Title: Date

Optionally, enable:

- Data Labels
- Trend Line (for smoother analysis)

Save as: Sales Trend (Date vs Total Sales)

Result Interpretation:

You'll see a line chart where:

- The X-axis shows dates
- The Y-axis shows total sales per date

Peaks indicate high-performing days,
Drops show slow sales periods.

3. Creating "Top Products: Product vs Total Profit" in Zoho Analytics

Step 1: Create the Profit Formula

If not already created, go to:
Data Table → Add → Formula Column

Formula:
"Units Sold" * ("Unit Price" - "Cost per Unit")

Name it: Total Profit

Step 2: Create a New Chart

Go to Reports → New Report → Chart View

Choose Bar Chart or Horizontal Bar Chart

In the designer:

- Product → X-Axis (or Y-Axis if using horizontal bar)
- Total Profit → Y-Axis (set to Sum)

Step 3: Sort and Format

Sort by Total Profit (Descending) → this shows the top products first.

Add labels: "Profit in ₹ / $" as per currency.

Enable color gradients (optional) for better visuals.

Save as: Top Products by Profit

Result Interpretation:

You'll see bars representing each product's profit.
The highest bar = most profitable product.

Example:

Product	Total Profit
Laptop	₹1000
Phone	₹800
Tablet	₹700

You can conclude Laptop is your top-performing product.

4. Combine in a Dashboard

You can now combine both reports into a dashboard for a clear overview.

Steps:

1. Go to Dashboards → Create New Dashboard
2. Name it: Sales Performance Dashboard
3. Drag:
    - Sales Trend (Date vs Total Sales)
    - Top Products by Profit
4. Add filters (e.g., by Region, Date Range)
5. Optional widgets:
    - KPI Widget 1: Total Sales → sum(Total Sales)
    - KPI Widget 2: Total Profit → sum(Total Profit)