ATLANTA AREA COMPENSATION ASSOCIATION

Excel Essentials for Compensation Teams: Streamlining Data, Formulas, and Dashboards

November 19, 2024

AACA Overview

Atlanta's Largest Professional Association Dedicated to Compensation

"Our mission is to serve as a resource for total rewards professionals by offering high quality and cost-effective educational programs, information sharing, and opportunities to connect and network with peers in the Atlanta area."

WorldatWork® Affiliate | Elite

2024 Upcoming Events

December 10: Holiday Gathering

Eclipse di Luna – Park Place

Dunwoody/Perimeter area

5:00–7:00 PM

TAPAS APPETIZERS ❋ FUN ❋ LIBATIONS
PRIZES ❋ DESSERTS

Meetings are *generally* held on the 2nd Tuesday (every other month)

Agenda:

- Why Excel
- Key Excel Skills for Compensation Professionals
  - Data Organization and Cleaning
  - Pivot Tables and Charts
  - Advanced Formula Functions
  - Data Modeling
  - Data Analysis Tools
  - Data Visualization
- Excel and AI
- Best Practices
- Resources
- Q&A

Why Excel?

Excel offers the flexibility, analytical power, and customization options needed to handle a wide range of compensation tasks, from calculations to reporting.

Flexibility

- Easy manipulation and analysis in one place

Customizable models

- Calculators and templates that align with unique pay plans

Powerful data analysis and calculation capabilities

- Advanced formulas
- Scenario planning and what-if analysis
- Data summarization

Data visualization for stakeholder communication

- Charts
- Dashboarding

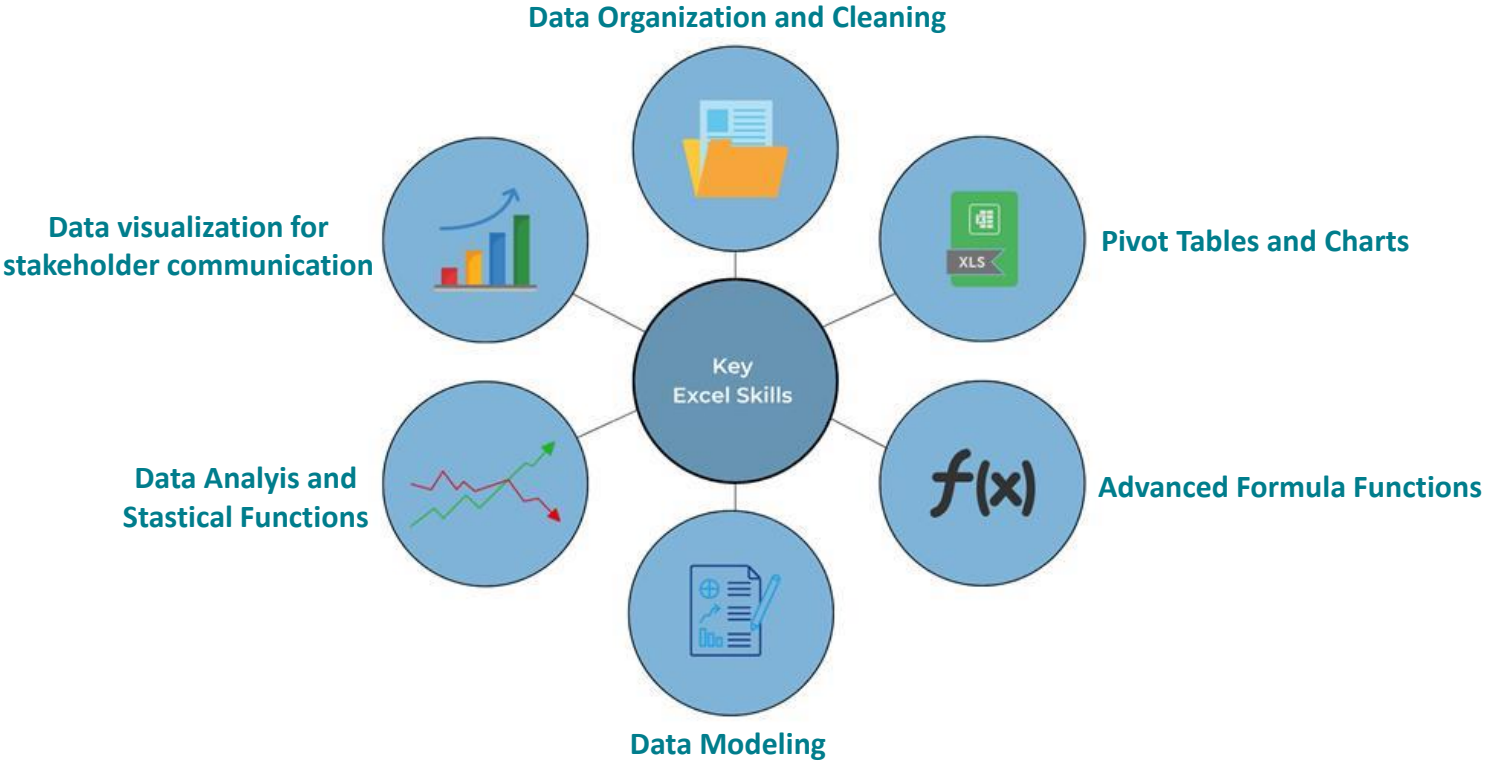
Combability with multiple data sources

- Databases
- ERP
- CSV files

Cost-effective and widely available

Key Excel Skills

Compensation professionals need a deep understanding of Excel's advanced features, data analysis tools, and automation capabilities to efficiently handle complex tasks.



Data Organization and Cleaning

Data organization and cleaning are essential for maintaining accuracy, consistency, and efficiency in any Excel analysis.

Structure Data as a Table

- Convert data to tables
- Consistent headers and formatting

Use Data Validations

- Drop-down lists for standard entries

Identify and Remove Duplicates

- Remove duplicate rows

Standardize text formatting

- **TRIM** function – remove extra spaces from text
- **CLEAN** function – remove non-printable characters
- Currency, Number, Date, etc.

Text Functions

- Text functions – **LEFT, RIGHT, MID, CONCAT**

Correct Data Entry Errors

- Find and Replace – correct common typos or inconsistencies to standardize into a single format (“NYC” to “New York City”)

Care with Blank Cells

- Fill in blank with values – “N/A” or “0” or “-”
- Fill down for missing data that should be repeated

Identify Outliers

- Conditional formatting to highlight values outside of a specific range

Group and Categorize

- Add categories for analysis – Test and Control groups
- Consolidate columns – first and last name

Data Range to Table

Converting a range to a table in Excel makes data easier to manage, automatically adjusts for changes, simplifies formulas, and unlocks built-in features like sorting, filtering, and dynamic formatting.

Emp ID	First Name	Last Name	Role	Region	Leader	Year	Salary	Variable Pay
123465	David	Allen	Director	South	Emily Wright	2023	160000	70000
378910	Bruce	Simmons	Director	East	Emily Wright	2023	160000	70000
910378	Michael	Sanders	Director	West	Emily Wright	2023	160000	70000
897654	Richard	Ortega	Account Executive	South	David Allen	2023	95000	95000
678263	John	Smith	Account Executive	East	John Smith	2023	95000	95000
963214	Ryan	Johnson	Account Executive	West	John Smith	2023	95000	95000
456321	Arleigh	Wright	Senior Account Manager	South	David Allen	2023	85000	85000

Emp ID	First Name	Last Name	Role	Region	Year	Leader	Salary	Variable	Full Name
123465	David	Allen	Director	South	2023	Emily Wright	$160,000	$70,000	David Allen
378910	Bruce	Simmons	Director	East	2023	Emily Wright	$160,000	$70,000	Bruce Simmons
910378	Michael	Sanders	Director	West	2023	Emily Wright	$160,000	$70,000	Michael Sanders
897654	Richard	Ortega	Account Executive	South	2023	David Allen	$95,000	$95,000	Richard Ortega
678263	John	Smith	Account Executive	East	2023	John Smith	$95,000	$95,000	John Smith
963214	Ryan	Johnson	Account Executive	West	2023	John Smith	$95,000	$95,000	Ryan Johnson
456321	Arleigh	Wright	Senior Account Manager	South	2023	David Allen	$85,000	$85,000	Arleigh Wright

Pivot Tables and Pivot Charts

Pivot Tables and Pivot Charts are powerful tools for summarizing, analyzing, and visualizing large data sets, enabling clear insights and effective decision-making.

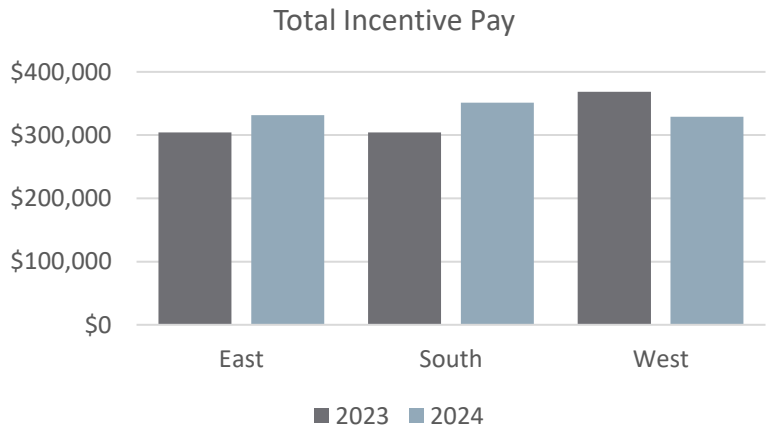
Pivot Tables

- Enables grouping, filtering and aggregating data dynamically
- Allows for summarization, organization and exploration of large data sets
- Provides insights into trends, patterns and/or relationships within data

Pivot Charts

- Complement pivot tables by visualizing summaries
- Enables easy identification of key metrics
- Allows for effective communication of findings

Total Incentive Pay	Column Labels		
Row Labels	**2023**	**2024**	**Grand Total**
East	$304,250	$331,500	$635,750
South	$304,125	$351,500	$655,625
West	$368,625	$329,250	$697,875
Grand Total	**$977,000**	**$1,012,250**	**$1,989,250**



Advanced Formula Functions

Essential Excel formulas empower compensation teams to streamline calculations, ensure accurate reporting, and efficiently analyze complex data.

Basic Calculations

- **SUM** – total compensation figures such as salaries and commissions
- **AVERAGE** – to find mean pay

Conditional Calculations

- **SUMIF/SUMIFS** – summing values based on one or more criteria
- **COUNTIF/COUNTIFS** – counting specific instances based on one or more criteria

Lookup and Reference

- **VLOOKUP/HLOOKUP/XLOOKUP** – find and return data from a reference table
- **INDEX/MATCH** – flexible lookups to retrieve values based on multiple criteria

Date and Time Functions

- **DATEIF** – calculating tenure or proration of compensation
- **YEARFRAC** – exact years of service

Logical Functions

- **IF** – apply conditions such as setting eligibility
- **IFS** – apply multiple conditions for setting varying rates

Error Handling

- **IFERROR** – to prevent error messages, display “0”, “-” or “NA”

Data Modeling

Data modeling streamlines data management and empowers users to perform advanced analytics seamlessly.

Combine Data

- **Connect and relate** data from different tables or sources without duplication

Simplify Analysis

- **Create relationships and analysis** for efficient analysis using tools like pivot tables

Enhance Reporting

- **Dynamic and interactive** dashboards and reports with linked data

Improve Scalability

- **Handle large data sets and complex relationships** using power query and power pivot tables

Data Modeling Examples

- Pay Equity Analysis
- Merit Increases
- Market Comparisons
- Incentive Plan Analysis
- Turnover and Retention
- Total Rewards Overview
- Sales Performance Tracking
- Revenue Trends

Data Analysis Tools

Essential data analysis tools in Excel and related software enable accurate reporting, strategic insights, and effective decision-making.

Advanced Charts and Visualizations

- **Interactive Dashboards** – dynamic dashboards with slicers, timelines and linked charts
- **Custom Charts** – specialized charts (e.g. scatter plots, waterfall) to display complex data in a meaningful way

What-if Analysis Tools

- **Goal Seek** – determine required values for specific outcomes
- **Scenario Manager** – compare different scenarios

Statistic Analysis Functions

- **Descriptive Statistics – AVERAGE, MEDIAN, STANDARD DEVIATION, AND PERCENTILES**
- **Regression Analysis** – identify correlations

Conditional Formatting

- **Highlighting patterns and outliers** – color scales, data bars and icons to identify trends, outliers and specific criteria

Power Pivot and Data Modeling

- **Data Relationships Modeling** – create relationships between different data sets
- **DAX (Data Analysis Expressions)** – advanced calculations, aggregations and customer measures for in-depth analysis

Data Visualization

Data visualization bridges the gap between data and understanding, empowering individuals and organizations to act on insights effectively.

Simplify Complexity

- **Quickly identifies** trends, patterns and outliers

Enhances Decision Making

- **Provides clear insights** to support data drive decisions

Improves communication

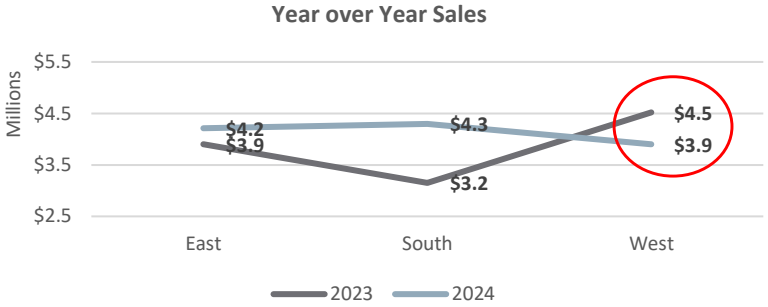
- **Makes data accessible** and engaging for diverse audiences

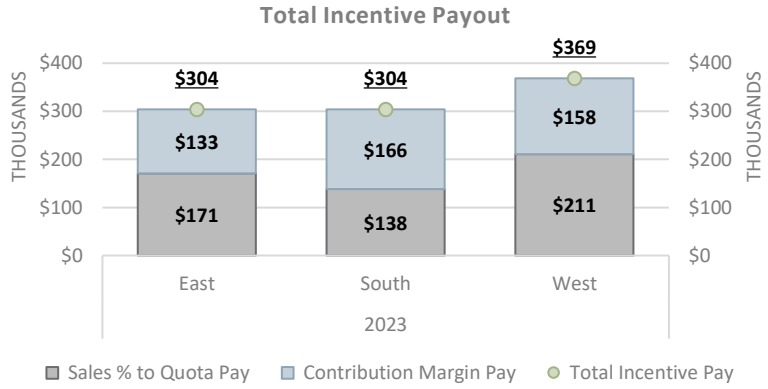
Highlights Relationships

- **Highlights correlations** within datasets

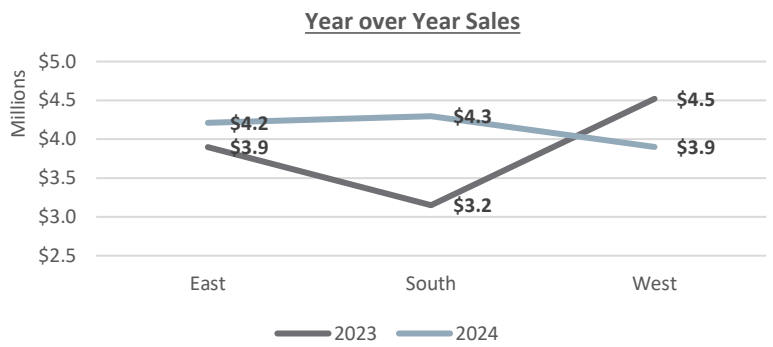
Increases Efficiency

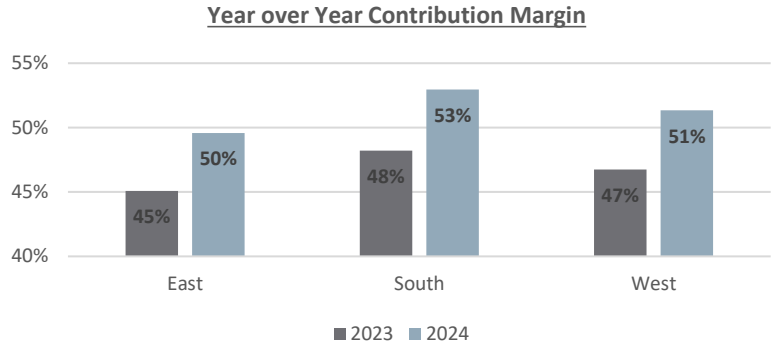
- **Presents key insights** visually, rather than sifting through raw numbers

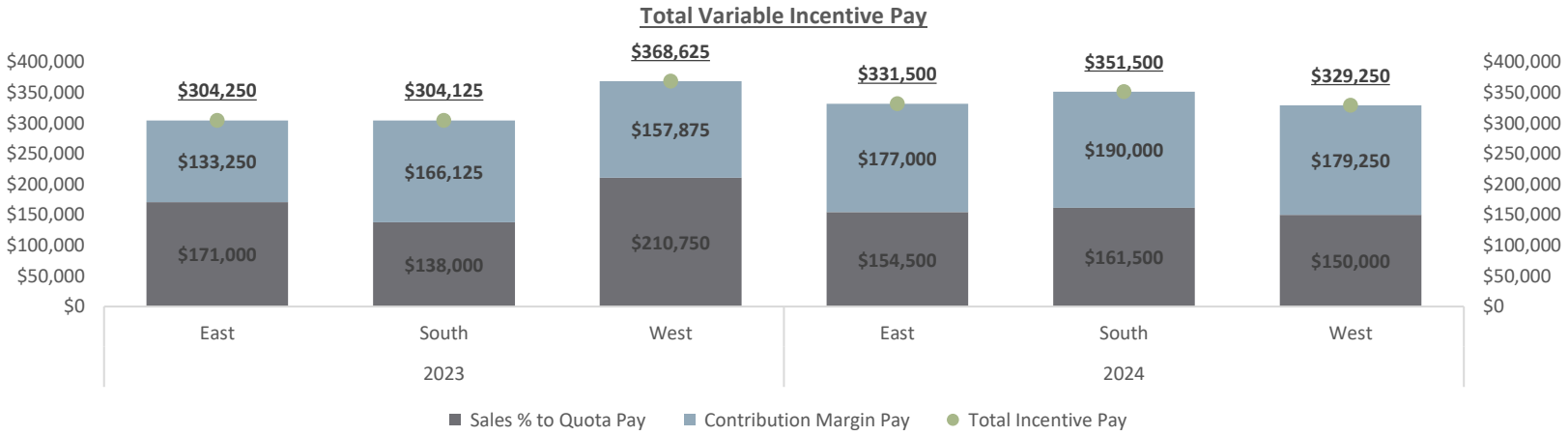




Dashboard - Example







AI - ChatGPT

ChatGPT offers quick, 24/7 Excel support, simplifying formulas, automation, and troubleshooting to boost your productivity.

Formula Assistance

- Generate complex formulas and understand how they work

Data Analysis

- Get help with organizing data, creating pivot tables, and analyzing results

Automation with Macros

- Learn how to write and use VBA code for automating repetitive tasks

Chart Creation

- Receive guidance on building clear and effective charts and dashboards

Error Troubleshooting

- Diagnose and fix formula errors or Excel issues

Excel Tips & Shortcuts

- Discover ways to speed up your work and use Excel more efficiently

Custom Templates

- Get advice on setting up templates for specific tasks, like financial modeling or performance tracking

Data Visualization

- Learn best practices for displaying data in visually compelling ways

AI – ChatGPT - Example

ChatGPT offers quick, 24/7 Excel support, simplifying formulas, automation, and troubleshooting to boost your productivity.

Question:

My data contains the following two names: The middle of the name contains “MOTO” and “CELL” which are the store types, I need to call out in a separate column which is which, is there a simple formula I can use to do this?

PBLA II 1169 MOTO UDIS REFORMA
SNLC CELL 1175 SANTA LUCIA

Result:

=IF(ISNUMBER(SEARCH(“MOTO", A1)), “MOTO", IF(ISNUMBER(SEARCH(“CELL", A1)), “CELL", ""))

- Replace **A1** with the cell reference containing your text.
- This formula checks for “MOTO" and labels it, then checks for “CELL" and labels it accordingly. If neither is found, it leaves the cell blank.

Excel Best Practices

Excel tips and best practices to improve efficiency, accuracy, and organization in your work.

Structure Data Properly

- Tables
- Consistency

Organize and Label Workbooks

- Label worksheets clearly
- Use a Table of Contents
- Color code worksheet tabs

Use Consistent and Clear Formulas

- Relative VS. Absolute (A$1 for row-locked, $A1 for column-locked, A1 for both)
- Named ranges
- Break down complex formulas (use helper cells)

Master Essential Excel Functions

- Lookup functions
- Logical functions

Leverage Data Validation and Drop-Down Lists

- Data validation – restrict inputs
- Drop-down lists – common fields

Streamline Analysis with Pivot Tables

- Create summaries quickly
- Use slicers for filters
- Refresh data regularly

Excel Best Practices

Excel tips and best practices to improve efficiency, accuracy, and organization in your work.

Use Conditional Formatting Thoughtfully

- Highlight key data
- Use sparingly

Automate Repetitive Tasks with Macros/Power Query

- Record simple macros
- Power query for data transformation

Protect and Secure Data

- Lock sensitive cells
- Password protect sensitive workbooks
- Version control

Use Charts and Visuals Effectively

- Right chart type
- Add titles and labels
- Create interactive dashboards

Document

- Comments for explanations
- Create a “Documentation” tab explaining key formulas, data sources and assumptions

Regularly Save and Back up your Work

- Enable autosave
- Create backups

Excel Resources

Summary of Excel courses provided by World At Work as well as helpful external platforms for additional learning and support.

World At Work

- Excel Skills for Compensation Professionals
- Analyzing and Automating Rewards Data with Excel
- Advanced Excel Skills for Compensation Professionals
- Dynamic Arrays: Excel Turbo-Charged
- Designing Powerful HR Dashboards
- Regression Analysis Made Easy with Excel
- Hello Excel Power Query, My New BFF
- Working Smarter and Faster with Excel

YouTube

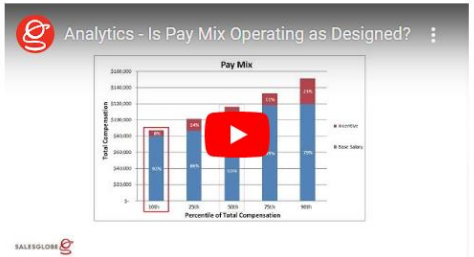
- Excel Is Fun - Comprehensive tutorials ranging from basic to advanced, focusing on formulas and functions
- Leila Gharani - Go-to for data analysis, dashboards, and Excel tips and tricks
- My Excel Online - learning a wide range of features, from beginner basics to advanced analysis
- Microsoft Excel Official Channel - Learning the latest updates and features directly from Microsoft
- MrExcel - Short, practical video tutorials that cover a wide range of topics, from basic formulas to complex data analysis

Other Resources

- Microsoft
- ChatGPT
- Google

Sales Compensation for Results – Excel Analytics

Sales Compensation for Results - SalesGlobe



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&
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SHRM CERTIFICATION

SHRM-CP | SHRM-SCP

24-VGXRT

1 - Credit

Thank you

Appendix

Data Organization and Cleaning - Workflow

Organize data into a structured table, clean and standardize entries with validation and formatting, automate repetitive tasks with Power Query, and document key steps for consistency.

Import Data and Convert

- Clean sheet and convert it to an Excel Table

Check for Duplicates

- Remove duplicate values that aren't necessary

Standardize Text Formatting

- Use **TRIM, CLEAN, UPPER**, or **PROPER** functions

Ensure Data Consistency

- Format values such as dates to be consistent throughout

Use Data Validation

- Enforce consistent entries in key fields

Handle Blanks and Outliers

- Fill in missing values
- Highlight anomalies with Conditional Formatting

Create Helper Columns

- Clean specific data fields where necessary

Automate Routine Steps

- Use Power Query to refresh data frequently

Document Cleaning Steps

- Future reference

Formula Examples

Essential Excel formulas empower compensation teams to streamline calculations, ensure accurate reporting, and efficiently analyze complex data.

Basic Calculations

- **SUM**(range)
- **AVERAGE**(range)

Conditional Calculations

- **SUMIF**(range, criteria, sum_range)
- **COUNTIF**(range, criteria)

Lookup and Reference

- **VLOOKUP**(value, table, col_index, FALSE)
- **XLOOKUP**(value, lookup_array, return_array)
- **INDEX MATCH**(column, MATCH(value, range, 0))

Date and Time Functions

- **DATEDIF**(start_date, end_date, "unit")
- **YEARFRAC**(start_date, end_date)

Logical Functions

- **IF**(condition, true_result, false_result)
- **IFS**(condition1, result1, condition2, result2, ...)

Error Handling

- **IFERROR**(formula, alternate_result)

VLOOKUP

Use a VLOOKUP to determine the commissions rate to pay at everyone's level of attainment.

1. Create a rate table

2. Name the table "AttainmentTable"

Quota Threshold	Commissions Rate
0%	5%
80%	10%
100%	15%

3. Set up your main data table

A	B	C	D	E	F
1	Employee	Sales Amount	Quota	Quota Attainment	Commissions Rate
2	Alice	40,000	50,000	125%	
3	Bob	60,000	40,000	67%	

4. Create a Range Lookup

VLOOKUP(E2, Attainment Table, 2, TRUE)

- E2 – Quota Attainment
- Attainment Table - The range of your attainment
- 2 - indicates the second column in the table which contains the commissions rate
- True – specifies an approximate match, so the formula finds the closest lower attainment threshold

A	B	C	D	E	F
1	Employee	Sales Amount	Quota	Quota Attainment	Commissions Rate
2	Alice	40,000	50,000	125%	15%
3	Bob	60,000	40,000	67%	5%

XLOOKUP

Use a XLOOKUP to determine the commissions rate to pay at everyone's level of attainment.

1. Create a rate table

2. Name the table "AttainmentTable"

Quota Threshold	Commission Rate
0%	5%
80%	10%
100%	15%

3. Set up your main data table

A	B	C	D	E	F
1	**Employee**	**Sales Amount**	**Quota**	**Quota Attainment**	**Commissions Rate**
2	Alice	40,000	50,000	125%	
3	Bob	60,000	40,000	67%	

4. Create a Range Lookup

XLOOKUP(E2, AttainmentTable[Attainment Threshold], AttainmentTable[Commission Rate], , -1)

- E2 – Quota Attainment
- AttainmentTable[Quota Threshold] – The column in the AttainmentTable that contains the quota attainment thresholds.
- AttainmentTable[Commission Rate] – The column in the AttainmentTable with the commissions rates
- Empty Value (, ,) – specifies no value if not found, but here we skip this parameter
- -1 – specifies that XLOOKUP should search for the closest smaller value if an exact match isn't found

A	B	C	D	E	F
1	**Employee**	**Sales Amount**	**Quota**	**Quota Attainment**	**Commissions Rate**
2	Alice	40,000	50,000	125%	15%
3	Bob	60,000	40,000	67%	5%

INDEX MATCH

Use INDEX MATCH to determine the commissions rate to pay at everyone's level of attainment.

1. **Create a rate table**
2. **Name the table "AttainmentTable"**

Quota Threshold	Commission Rate
0%	5%
80%	10%
100%	15%

3. Set up your main data table

A	B	C	D	E	F
1	**Employee**	**Sales Amount**	**Quota**	**Quota Attainment**	**Commissions Rate**
2	Alice	40,000	50,000	125%	
3	Bob	60,000	40,000	67%	

4. Create Index Match lookup

=INDEX(AttainmentTable[Commission Rate], MATCH(D2, AttainmentTable[Quota Threshold], 1))

- INDEX(AttainmentTable[Commission Rate], ...): This part of the formula retrieves a value from the Commission Rate column in the AttainmentTable based on the row number returned by MATCH.
- MATCH(D2, AttainmentTable[Quota Threshold], 1): Finds the closest lower match to the quota attainment in E2 within the Attainment Threshold column.
    - **E2**: The quota attainment value for the employee.
    - **AttainmentTable[Attainment Threshold]**: The range of attainment thresholds in your table.
    - 1: This third parameter tells MATCH to find the largest value that is less than or equal to D2 (closest lower match).

A	B	C	D	E	F
1	**Employee**	**Sales Amount**	**Quota**	**Quota Attainment**	**Commissions Rate**
2	Alice	40,000	50,000	125%	15%
3	Bob	60,000	40,000	67%	5%