

Chapter-5 Working with Date Functions in MS Excel

Excel provides a range of date functions to perform calculations, formatting, and analysis on date values. These functions are especially useful for scheduling, tracking, and time-sensitive tasks.

1. Common Date Functions

Function	Description	Example	Result
TODAY	Returns the current date (updates automatically).	=TODAY()	2024-12-23 (current date).
NOW	Returns the current date and time.	=NOW()	2024-12-23 10:30 AM.
DATE	Creates a date from year, month, and day inputs.	=DATE(2024, 12, 25)	2024-12-25.
YEAR	Extracts the year from a date.	=YEAR("2024-12-23")	2024.
MONTH	Extracts the month from a date (1-12).	=MONTH("2024-12-23")	12.
DAY	Extracts the day of the month from a date.	=DAY("2024-12-23")	23.
WEEKDAY	Returns the day of the week as a number (1=Sunday, 7=Saturday).	=WEEKDAY("2024-12-23")	2 (Monday).
TEXT	Formats a date as text in a specific format.	=TEXT(TODAY(), "MMMM DD, YYYY")	"December 23, 2024".

2. Adding and Subtracting Dates

You can add or subtract days directly from a date.

Example 1: Add Days

- **Formula:**

```
=TODAY() + 7
```

- **Result:** Adds 7 days to today's date (e.g., 2024-12-30).

Example 2: Subtract Dates

- **Formula:**

=DATE (2024, 12, 31) - DATE (2024, 12, 23)

- **Result:** 8 (difference in days).

Using EDATE for Months

- Adds or subtracts a specified number of months:

=EDATE (TODAY (), 2)

- **Result:** Adds 2 months to today's date (e.g., 2025-02-23).

3. Calculating Differences Between Dates

Function	Description	Example	Result
DATEDIF	Calculates the difference between two dates in years, months, or days.	=DATEDIF (A1, A2, "D")	Total days difference.
NETWORKDAYS	Returns the number of working days between two dates (excludes weekends and holidays).	=NETWORKDAYS (A1, A2, B1:B5)	Working days excluding holidays.
YEARFRAC	Calculates the fraction of a year between two dates.	=YEARFRAC (A1, A2)	Years (e.g., 1.25).

4. Extracting Components of Dates

Function	Description	Example	Result
HOUR	Extracts the hour from a time.	=HOUR (NOW ())	Current hour.
MINUTE	Extracts the minute from a time.	=MINUTE (NOW ())	Current minute.
SECOND	Extracts the second from a time.	=SECOND (NOW ())	Current second.
WEEKNUM	Returns the week number of a date in the year.	=WEEKNUM ("2024-12-23")	52.
ISOWEEKNUM	Returns the ISO 8601 week number.	=ISOWEEKNUM ("2024-12-23")	52.

5. Formatting Dates

You can format dates using the TEXT function or by changing cell formatting.

Common Formats:

- **YYYY-MM-DD: ISO standard (e.g., 2024-12-23).**
- **MM/DD/YYYY: US format (e.g., 12/23/2024).**
- **DD/MM/YYYY: UK format (e.g., 23/12/2024).**
- **Custom: Use TEXT:**

```
=TEXT(TODAY(), "MMMM DD, YYYY")
```

Result: "December 23, 2024".

6. Working with Times and Dates

Dates and times are stored as serial numbers in Excel (e.g., 1 = January 1, 1900).

Combining Date and Time

Use **DATE** and **TIME** together:

```
=DATE(2024, 12, 23) + TIME(10, 30, 0)
```

Result: 2024-12-23 10:30.

Extracting Time

- **Extract the time portion:**

```
=TEXT(NOW(), "HH:MM AM/PM")
```

7. Advanced Date Functions

- **WORKDAY:** Returns a workday after a specified number of days.

```
=WORKDAY(TODAY(), 5)
```

Result: Adds 5 workdays (excludes weekends).

- **EOMONTH:** Returns the last day of the month.

```
=EOMONTH(TODAY(), 1)
```

Result: Last day of the next month (e.g., 2025-01-31).

Tips for Using Date Functions

1. **Ensure Correct Date Formats:** Always use recognizable date formats (e.g., YYYY-MM-DD).
2. **Avoid Text Dates:** Convert text dates using `DATEVALUE` if needed.

```
=DATEVALUE("12/23/2024")
```

3. **Account for Regional Settings:** Be mindful of regional date formats (e.g., US vs. UK).

Mastering date functions can streamline your workflows and enhance your ability to manage time-based data in Excel.