

Prompt Library

Every prompt used in the live sessions, in the exact order they appear — copy and paste each one as you go.

Course	AI & Excel in the Workplace
Date	9 September 2026
Tutor	Enda Rochford, RandTrad Consulting

Every prompt used in the live sessions, in the exact order they appear. Copy and paste each one as you go.

Contents

Session 1: AI Fundamentals, Data Protection, ChatGPT for Excel

Demo 1: ChatGPT Formula Generation

Exercise 1: Cleaning a Messy Imported Dataset

Session 2: Copilot Deep Dive, Claude, Gemini, Perplexity

Demo 2: Copilot Agent Mode — Dashboard from Raw Data

Exercise 2: Building a Dashboard from Raw Data

Demo 3: Claude — Structured Analysis & Validation

Demo 4: Perplexity Research-to-Excel

Exercise 3: Budget vs Actual Variance Analysis

Session 3: Integrated Workflow, Governance, Workflow Design

Demo 5: Integrated Workflow — Sales Analysis Report

Exercise 4: Integrated Workflow

Bring Your Own Spreadsheet

AI Governance & Validation Wrap

Quick Reference: Prompt Pattern Library

Session 1: AI Fundamentals, Data Protection, ChatGPT for Excel

Demo 1: ChatGPT Formula Generation

Prompt 1 — XLOOKUP for invoice matching

Write an XLOOKUP formula for Excel that:

- Looks up an invoice number in column A of a payment log
- Returns the expected amount from column D
- If no match is found, returns "Not found" instead of #N/A
- The table is in cells A1:H20

Prompt 2 — Nested IF for expense flags

Create a nested IF formula for Excel that checks an expense amount in cell B2:

- Below €50: return "OK"
- €50 to €500: return "Review"
- Above €500: return "Escalate"

Prompt 3 — Tenure calculation from start dates

I have staff start dates in column B. Write a formula to calculate tenure in years and months as of today, and explain how it works.

Prompt 4 — Debug a broken SUMIFS formula

My formula returns #VALUE! and I don't know why. The formula is:
`=SUMIFS(D2:D20, A2:A20, "Active", B2:B20, >"01/01/2026")`

The data: Column D has sales values, Column A has status (Active/Inactive/Pending),
 Column B has transaction dates in DD/MM/YYYY format.

Prompt 5 — Locale correction (European Excel)

Note: I'm using European Excel with semicolon separators.

(Append this to Prompt 4's output to get the semicolon version of the corrected formula.)

Exercise 1: Cleaning a Messy Imported Dataset

Prompt 6 — Generate cleaning formulas for messy customer list

I have a messy customer list with these columns:

- Name (with extra spaces)
- Email
- Join Date (mixed formats: DD/MM/YYYY, YYYY-MM-DD, and text like "March 12 2024")
- Phone (stored as text with inconsistent formatting)
- Spend (stored as text with € symbol and commas)

Write Excel formulas to:

1. Trim leading and trailing spaces from the Name column
2. Convert all dates to a consistent DD/MM/YYYY format
3. Standardise phone numbers to a consistent format
4. Convert the Spend column from text to a real number

Prompt 7 — Remove duplicates and blank rows

How do I remove duplicate rows in Excel based on the Email column, keeping the first occurrence? Also, how do I delete all completely blank rows?

Prompt 8 — Categorise expenses (🟢 Extend tier)

I have an expense list with free-text descriptions and amounts. Write formulas to:

1. Categorise each expense based on its description (Travel, Meals, Office Supplies, Software, Other)
2. Convert amounts to real numbers
3. Flag any expense over €500 for review

Prompt 9 — Two-AI validation (🔴 Challenge tier)

Review these cleaning formulas for correctness. The intent is to clean a customer list.
 The formulas are:

[paste formulas from ChatGPT]

Identify any errors or edge cases.

Session 2: Copilot Deep Dive, Claude, Gemini, Perplexity

Demo 2: Copilot Agent Mode — Dashboard from Raw Data

Prompt 10 — Ask Copilot to analyse the data

Analyse this sales data and show me the top 5 products by revenue.

Prompt 11 — Average revenue by region

What is the average revenue by region?

Prompt 12 — Create a PivotTable

Create a PivotTable showing revenue by region and product, with revenue as the value field (summed). Sort by total revenue descending.

Prompt 13 — Build a complete dashboard

Create a dashboard for this data. Add a KPI section at the top showing total revenue, total orders, and average order value. Below that, a PivotTable of revenue by product category and a PivotTable of revenue by month. Add a bar chart for revenue by region and a line chart for revenue by month. Add slicers for Region and Category.

Exercise 2: Building a Dashboard from Raw Data

(Uses the same Prompts 10–13 above, repeated on the sample sales dataset.)

Prompt 14 — Add conditional formatting for high-value regions

Add conditional formatting that highlights any region with total revenue above €100,000 in green.

Demo 3: Claude — Structured Analysis & Validation

Prompt 15 — Claude generates a management narrative from data

Write a 150-word management summary based on this quarterly sales data.
Format as bullet points with: the strongest and weakest regions, the overall trend, and one recommendation.

Region	Q1 Actual	Q2 Actual	Q3 Actual	Q4 Actual
North	120,000	135,000	128,000	150,000
South	95,000	88,000	102,000	118,000
East	140,000	145,000	152,000	160,000
West	60,000	55,000	48,000	52,000

Include: the strongest and weakest regions, the overall trend, and one recommendation.

Prompt 16 — Claude validates the expense-flag formula (two-AI approach)

Review this Excel formula for correctness. The intent is to check an expense amount and return a status: below €50 = "OK", €50-€500 = "Review", above €500 = "Escalate".

The formula is:

```
=IF(B2<50, "OK", IF(B2<=500, "Review", "Escalate"))
```

Identify any errors or boundary issues.

Demo 4: Perplexity Research-to-Excel

Prompt 17 — Research salary benchmarks (structured for Excel import)

Research current average salary benchmarks for [role] in the Irish market.
Structure the output as a table with: role, average salary, and source citation.

Exercise 3: Budget vs Actual Variance Analysis

Prompt 18 — Copilot adds variance columns

Add two columns after the Actual columns: "Variance" (Budget minus Actual) and "Variance %" (Variance divided by Budget, formatted as percentage).

Prompt 19 — Copilot applies conditional formatting to variances

Apply conditional formatting: highlight unfavourable variances over 10% in red, and favourable variances in green.

Prompt 20 — Copilot creates a variance chart

Create a column chart comparing Budget vs Actual by department, with variance percentage shown as a data label.

Prompt 21 — Copilot drafts month-end commentary (🟢 Extend)

Draft a brief month-end commentary for the board pack. Flag any department with variances over 10%. Summarise the overall position in 3 sentences.

Session 3: Integrated Workflow, Governance, Workflow Design

Demo 5: Integrated Workflow — Sales Analysis Report

Step 1: Perplexity — Research (Public Data)

Prompt 22 — Research market benchmarks for the integrated workflow

Research current market benchmarks for [product/service category] in the Irish market. Structure as a table with: benchmark, value, and source citation.

Step 2: ChatGPT — Structure & Framework (Anonymised Data)

Prompt 23 — Generate the analysis framework formulas

I'm building a sales analysis spreadsheet. I need a framework with these metrics:

1. Total revenue by region
2. Month-on-month change
3. Top 5 products by revenue
4. Profit margin (revenue minus cost, divided by revenue)

Generate the Excel formulas I need:

- A SUMIFS formula for revenue by region
- A month-on-month percentage change formula
- A formula for top 5 products (RANK or LARGE)
- A profit margin formula

Prompt 24 — Locale note (append to Prompt 23 output)

Note: I'm using European Excel with semicolon separators.

Step 3: Claude — Validate (Anonymised Data)

Prompt 25 — Claude validates the framework formulas

Review these Excel formulas for a sales analysis framework.

The metrics are: revenue by region, month-on-month change, top 5 products, profit margin.

Formulas to review:

[paste formulas from ChatGPT]

Check: Are the formulas correct? Are the boundary conditions right? Any edge cases I should test (zero values, missing data, negative margins)?

Step 4: Copilot — Build with Real Data (In-Tenant)

Prompt 26 — Copilot builds the sales analysis dashboard

Build a sales analysis dashboard:

- KPI section: total revenue, total orders, average order value
- PivotTable of revenue by region
- PivotTable of revenue by month
- Bar chart of top 5 products by revenue
- Line chart of revenue by month
- Slicers for Region and Category

Prompt 27 — Copilot adds profit margin column

Add a profit margin column: $(\text{Revenue} - \text{Cost}) / \text{Revenue}$, formatted as a percentage.

Prompt 28 — Copilot creates a summary table with trend arrows

Create a summary table showing revenue by region with month-on-month trend arrows.

Step 5: Document & Explain

Prompt 29 — Copilot adds the AI Workflow Log sheet

Add a new sheet called "AI Workflow Log" with these notes:

- Research: Perplexity (public data) – market benchmarks
- Structuring: ChatGPT (anonymised metrics) – analysis framework formulas
- Validation: Claude (anonymised) – formula review
- Analysis: Copilot in M365 (real data, in-tenant) – sales dashboard, PivotTables, charts
- Validation: Cross-checked revenue totals against manual calculation
- AI-assisted output: Yes

Exercise 4: Integrated Workflow

(Uses Prompts 22–29 above on attendee's own data or provided sample.)

Bring Your Own Spreadsheet

Prompt 30 — Universal starter for any spreadsheet

Analyse this data and tell me: what are the key trends, what stands out as unusual, and what would you recommend I focus on?

Prompt 31 — Build a quick dashboard on your own data

Create a one-page dashboard from this data. Include the most important KPIs, a trend chart, and a breakdown by [your main category column].

Prompt 32 — Clean and structure raw data

This data needs cleaning before I can analyse it. Help me identify and fix:

- Inconsistent formats
- Duplicate entries
- Missing values
- Any data that looks incorrect

AI Governance & Validation Wrap

(No prompts — this is a discussion slide. Validation techniques were practised throughout.)

Quick Reference: Prompt Pattern Library

The repeating patterns behind every prompt above:

Pattern	Structure	When to use
Formula generation	Describe intent → specify cell references → specify locale	Any time you need a formula
Formula debugging	Paste formula → describe error → describe data → ask why	Formula returns an error
Two-AI validation	Generate with one AI → paste to second AI → ask for errors	Complex formulas, high stakes
Data cleaning	List the problems → ask for formulas to fix each → apply → validate	Messy imports, CRM exports
Dashboard building	List the elements you want (KPIs, tables, charts, slicers) → specify layout	Copilot Agent Mode
Research-to-Excel	Ask for structured table with citations → copy to Excel	Public data research
Narrative from data	Paste data → specify format and length → ask for summary/recommendation	Reports, management summaries
Documentation	List tools used, data types, validation performed, AI-assisted label	Compliance, audit trail

All prompts in this document are designed for copy-paste during live delivery. Prompts are tool-agnostic unless specified (Copilot = in Excel, ChatGPT/Claude/Perplexity = in their respective web interfaces).

Every prompt has been tested for the August 2026 tool versions. AI outputs may vary — always validate against known data.