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Digital Skills · Book 5

Power BI Basics

Turn a spreadsheet into clear charts and a simple dashboard — starting from zero

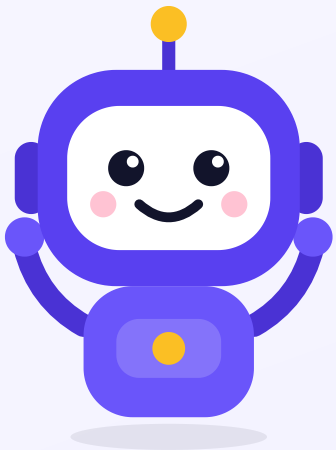
Total beginner · ages 13 and up

About 85 minutes

10 chapters with quizzes

Free

Rows and rows of numbers? Let's turn them into one clear page that answers a real question!



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Power BI Basics

Turn a spreadsheet into clear charts and a simple dashboard — starting from zero
Digital Skills, Book 5 · First edition, November 2026

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What you will learn

- What Power BI is and when to use it instead of a spreadsheet
- What you need: the free Desktop app, accounts and licenses
- How to clean data with Power Query — once, then refresh
- How to connect tables in a simple model and write your first DAX measures
- How to choose visuals and design a one-page dashboard with the Q-K-T-D recipe
- How to share safely, avoid public data leaks, and keep learning

This is **Book 5**, the last book of the **Digital Skills** series. It builds on Book 2 (Excel for Beginners) and Book 3 (Google Sheets): if you can make a tidy table and a SUM formula, you're ready. If not, read Chapter 3 of Book 2 first.

Our honest promise

Power BI is a professional tool, and it has a learning curve. This book won't make you a data analyst in a week. It will help you build your **first clean, honest dashboard** and understand the words experts use. Microsoft updates Power BI every month, so some buttons may look a little different — look for the same idea.

Age and account rules

This series is for ages 13 and up. You can practice in the free **Power BI Desktop** app without signing in. Sharing online (the Power BI service) needs a **work or school email** — students usually use a school account their school manages.

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What you need

Item	Why
A Windows 10 or 11 computer	Power BI Desktop runs on Windows only
Power BI Desktop (free)	Where you build reports
A tidy Excel or CSV file	Your sales, expenses, grades or attendance
Book 2 or 3 basics	Tidy tables and simple formulas
About 30–45 minutes a day	Power BI rewards steady practice

How to use this book

1 **Keep Power BI Desktop open**

Build every example with your own small file. A 50-row table is perfect for learning.

2 **Type measures exactly**

DAX measures are shown in boxes. Every bracket and quotation mark matters.

3 **Do the quiz and the task**

Every chapter ends with key takeaways, 3 quiz questions with answers, and a practice task.

A DAX MEASURE LOOKS LIKE THIS

```
Total Sales = SUM(Sales[Amount])
```

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THE END Quick Summary

WHAT'S NEXT Your Next Learning Path

EXTRA Free ToolsKo Tools for This Book

EXTRA Words to Know (Glossary)

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CHAPTER 1

Why Power BI Skills Matter

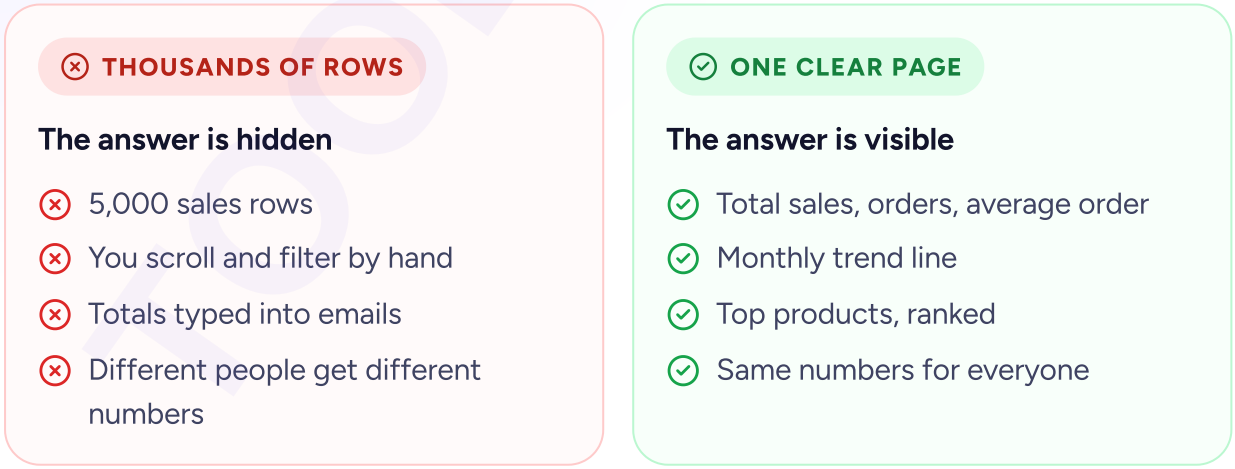
Spreadsheets store numbers. Dashboards tell the story behind them. Power BI helps you go from one to the other.

A store owner has a year of sales in Excel: 5,000 rows. The question is simple — "Which products sell best, and are sales going up?" — but the answer is buried in rows. A dashboard shows it on one page: a few big numbers, a trend line and a ranked bar chart. Anyone can understand it in seconds.

New word: dashboard

A **dashboard** is one page of numbers and charts that answers a question at a glance — like the dashboard of a car that shows speed, fuel and warnings without you opening the engine. **Power BI** is Microsoft's tool for building them from your data.

PICTURE 1 **Rows vs a dashboard**



Same data. The dashboard shows the answer instead of making people search for it.

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When to use Power BI (and when not)

Use a spreadsheet when...	Use Power BI when...
You type and edit data	You analyze data that already exists
The list is small and simple	There are many rows, months or files
One person uses it	Many people need the same numbers
You need a quick total	You need the same report every week or month

PICTURE 2 **Power BI myths vs truths**

MYTH

What people think

- "Dashboards must be colorful and full."
- "You need to be a programmer."
- "More charts = more insight."
- "The tool does the thinking."

TRUTH

What really works

- Plain pages that answer one question
- Clicks first, a few simple formulas later
- Fewer, better charts
- Clean data and a clear question do the work

A good dashboard starts with a good question, not with colors.

The big idea of this book

One question, one clear page. Clean your data, decide the one question the page must answer, and show only what helps answer it.

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A real-world example

Carlo runs a small minimart. Every month he emailed his business partner a long Excel file, and every month they argued about the numbers. He built one Power BI page: total sales, number of orders, a monthly trend and the top 10 products. He saves it as a PDF each month. Now their meetings start with decisions, not arguments.

QUICK RECAP

A dashboard is one page that answers a question at a glance. Power BI turns existing data into dashboards. Use spreadsheets to type and edit; use Power BI to analyze and report. Big idea: one question, one clear page.

TRY IT NOW

Find your question

1. Pick one data file you already have (sales, expenses, grades, attendance).
2. Write the one question you want answered ("Which products sell best each month?").
3. Write who will read the answer.

Key takeaways

- A dashboard answers a question on one page.
- Spreadsheets edit data; Power BI analyzes it.
- Fewer, better charts beat many charts.
- Big idea: one question, one clear page.

Quiz: 3 quick questions

1. What is a dashboard?

A. One page of numbers and charts that answers a question at a glance
B. A kind of keyboard
C. A long list of rows

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2. When is Power BI a better choice than a spreadsheet?

A When many people need the same report from lots of existing data

B When you type a short list once

C Never

3. What is the big idea of this book?

A More charts, more insight

B One question, one clear page

C Colors first

Answers

1. **A. One page of numbers and charts that answers a question at a glance** — Like a car dashboard: key information without opening the engine.
2. **A. When many people need the same report from lots of existing data** — Power BI shines at repeated analysis and reporting.
3. **B. One question, one clear page** — A clear question decides what goes on the page.

PRACTICE TASK

Your dashboard question

Write your question, the 3 numbers that would answer it (for example: total sales, number of orders, average order), and the 2 charts you imagine. Keep it — you will build it in this book.

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CHAPTER 2

Beginner Basics: What You Need and the Power BI Screen

Power BI has a few parts and a few license rules. Knowing them early saves a lot of confusion.

The two main parts

Part	What it is	Good to know
Power BI Desktop	Free app where you build reports	Windows 10 or 11 only; get it from the Microsoft Store or Microsoft Download Center; no sign-in needed to practice
Power BI service	Website (app.powerbi.com) where reports are shared	Needs a work or school email — Gmail, Outlook.com and similar personal emails aren't accepted

Using a Mac?

There's no Power BI Desktop for Mac. Mac users can view and make some edits in the Power BI service in a browser, or run Windows on the Mac (a virtual machine or a cloud PC) to use Desktop.

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Licenses: who pays for what

License	Price	What you can do
Power BI Desktop	Free	Build reports on your computer; save as .pbix; export PDF
Free license (service)	Free	Publish to your own My workspace — for yourself only
Power BI Pro	USD 14 per user per month (paid yearly)	Share reports and work in shared workspaces
Premium Per User	USD 24 per user per month (paid yearly)	Pro features plus bigger, advanced features

From microsoft.com Power BI pricing, checked November 21, 2026. Many companies and schools already include licenses — ask your IT team first.

Sharing needs licenses on both sides

In normal sharing, both the person sharing and the people viewing need a Pro (or higher) license, unless the company has special capacity. That's why many beginners share a **PDF export** at first.

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The parts of Power BI Desktop

PICTURE 3 **Five parts of Power BI Desktop**



Click a chart type in Visualizations, then tick columns in the Data pane to fill it.

Words you will use

Word	What it means	Example
Report	One or more pages of visuals in a .pbix file	Monthly Sales.pbix
Visual	One chart, card, table or map	A bar chart of top products
Power Query	The cleaning tool inside Power BI	Remove empty rows, fix data types
Model	Your tables and how they connect	Sales linked to Products
Relationship	A link between two tables	Sales[ProductID] → Products[ProductID]
Measure	A calculation written in DAX	Total Sales = SUM(Sales[Amount])
DAX	The formula language of Power BI	SUM, COUNTROWS, DIVIDE, CALCULATE
Slicer	A filter on the page that readers click	A Month or Branch slicer

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PICTURE 4 **The Power BI workflow**



Build once. Next month, add the new data and click Refresh — every step runs again.

QUICK RECAP

Power BI Desktop (free, Windows only) builds reports; the Power BI service (work or school email) shares them. A free license keeps reports to yourself; sharing needs Pro or higher on both sides, so beginners often share PDFs. Desktop has the ribbon, three views, canvas, Visualizations pane and Data pane. Workflow: get data, clean, model, measure, visualize, share and refresh.

TRY IT NOW

Install and explore

1. Install Power BI Desktop from the Microsoft Store (Windows).
2. Open it and find the Report, Table and Model views.
3. Find the Visualizations and Data panes.

Key takeaways

- Desktop is free and Windows-only.

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- The service needs a work or school email.
- Free = for yourself; sharing needs Pro or higher.
- Workflow: get, clean, model, measure, visualize, share.

Quiz: 3 quick questions

1. Can you sign up for the Power BI service with a Gmail address?

A No — it needs a work or school email
B Yes, always
C Only on weekends

2. What can you do with a free license in the service?

A Keep reports in your own My workspace, for yourself
B Share with your whole company
C Publish to everyone securely

3. What is a measure?

A A calculation written in DAX
B A kind of chart
C A ruler

Answers

1. **A. No — it needs a work or school email** — Personal email addresses aren't accepted for the service.
2. **A. Keep reports in your own My workspace, for yourself** — Sharing needs Pro or higher.
3. **A. A calculation written in DAX** — Measures calculate totals, averages and more.

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PRACTICE TASK

Your setup check

Write down: your computer type (Windows or Mac), whether you have a work or school account, and how you will share your first report (probably a PDF). This decides your path for the rest of the book.

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CHAPTER 3 · LESSON 1

Get and Clean Your Data with Power Query

Most of a data analyst's time goes into cleaning data. Power Query lets you clean once — and repeat the same steps automatically next time.

Get data

1 **Home → Get data**

Choose Excel workbook or Text/CSV. (Google Sheets users: download your sheet as .xlsx or .csv first.)

2 **Pick the table or sheet**

The Navigator shows a preview. Tick the table you want.

3 **Choose Transform Data**

Not Load — Transform opens Power Query so you can clean first.

New word: Power Query

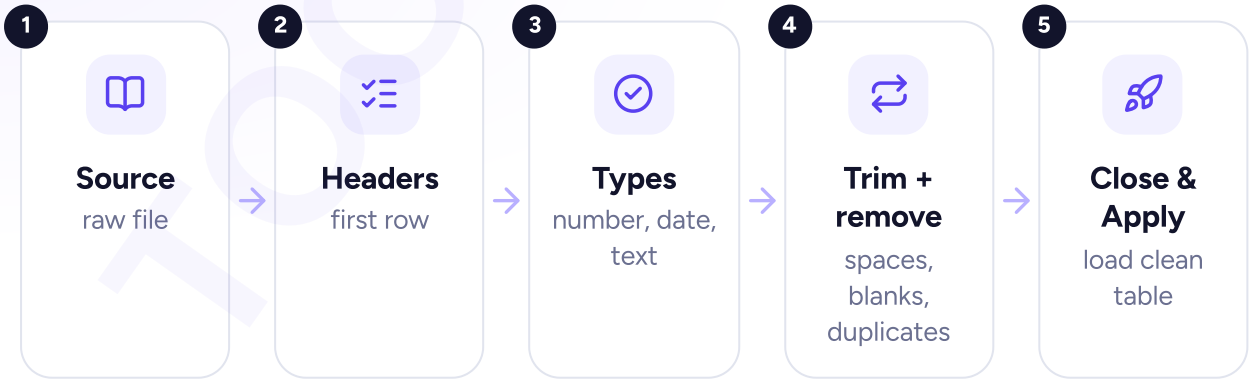
Power Query is a cleaning room for your data. Every click you make (remove a column, fix a date) is recorded as a step, like a recipe. Next month, Power BI follows the same recipe on the new data — no repeat work.

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The everyday cleaning steps

Step	Why	Where
Remove columns you don't need	Smaller, clearer model	Right-click header → Remove
Use first row as headers	Proper column names	Home → Use First Row as Headers
Set data types	Numbers as numbers, dates as dates	Click the icon left of each header
Rename columns	Clear names like Amount, OrderDate	Double-click the header
Trim text	Removes extra spaces that break matching	Transform → Format → Trim
Remove duplicates	One row per record	Right-click an ID column → Remove Duplicates
Remove blank rows	No empty records	Home → Remove Rows → Remove Blank Rows

PICTURE 5 **Applied steps: your cleaning recipe**



Each step appears in the Applied Steps list on the right. Click any step to see the data at that moment.

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Data types matter most

If Amount is set as text, Power BI can't add it. If OrderDate is text, you can't show months. Check the small icon beside every column header: 123 or 1.2 for numbers, a calendar for dates, ABC for text.

Your source file stays safe

Power Query doesn't change your original Excel or CSV file. It cleans a copy inside Power BI.

Finish

Click **Home → Close & Apply**. The clean table loads into Power BI, and you can see it in Table view.

QUICK RECAP

Get data from Excel or CSV and choose Transform Data. In Power Query, remove extra columns, set headers and data types, rename, trim, remove duplicates and blanks. Every click becomes an applied step that runs again on refresh. Your source file isn't changed. Close & Apply loads the clean table.

TRY IT NOW

Clean a real file

1. Get data from your Excel or CSV file and choose Transform Data.
2. Set every column's data type and rename unclear columns.
3. Trim text, remove blank rows, then Close & Apply.

Key takeaways

- Transform first, then load.
- Data types: numbers, dates, text.
- Every click is a repeatable step.

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The original file is never changed.

Quiz: 3 quick questions

1. What does Power Query record when you clean data?

A Each action as a step it can repeat on refresh
B Nothing
C Only the final total

2. Your Amount column has the ABC icon. What's wrong?

A It's stored as text — change it to a number type
B Nothing
C It's a date

3. Does Power Query change your original Excel file?

A No — it cleans a copy inside Power BI
B Yes, always
C Only on Fridays

Answers

1. **A. Each action as a step it can repeat on refresh** — Applied steps work like a recipe.
2. **A. It's stored as text — change it to a number type** — Text can't be added up.
3. **A. No — it cleans a copy inside Power BI** — The source file stays as it was.

PRACTICE TASK

Break and fix

Add a messy row to your source file (extra spaces, a blank row, a duplicate). In Power BI, click Refresh and check that your steps cleaned it automatically. Write down which step handled each problem.

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CHAPTER 4 · LESSON 2

Model Your Data: Connect Tables the Simple Way

Real data often lives in more than one table. A simple model connects them so one click filters everything correctly.

New word: relationship

A **relationship** links two tables using a shared column, like a ProductID. Think of a school: the class list (one row per student) connects to the grades list (many rows per student) through the student number.

Two kinds of tables

Kind	What it holds	Example
Fact table	Events that happen many times — usually numbers	Sales: Date, ProductID, Qty, Amount
Lookup (dimension) table	Descriptions, one row each	Products: ProductID, Name, Category
Date table	One row per day, with month and year columns	Calendar: Date, Month, Year

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PICTURE 6 **A simple model: lookups around the facts**



Lookup tables sit around the fact table. This shape is called a star schema — the most common, easiest model.

Connect tables

1 **Open Model view**

Click the Model view icon on the left. You see each table as a box.

2 **Check automatic links**

Power BI often detects relationships when column names match.

3 **Drag to connect**

If not, drag ProductID from Products onto ProductID in Sales.

4 **Check the direction**

You should see 1 on the lookup side and * (many) on the fact side.

Why the model matters

With a relationship, a slicer on Products[Category] filters the Sales numbers automatically. Without it, every chart shows the same grand total — a classic beginner surprise.

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Keep it simple

For your first reports, one fact table and two or three lookup tables is plenty. If you only have one table, that's fine too — skip the model and go to measures.

QUICK RECAP

Fact tables hold repeated events; lookup tables hold descriptions; a date table holds days, months and years. Connect them in Model view with one-to-many relationships (1 on the lookup side, many on the fact side). This star shape lets slicers filter correctly. Start simple.

TRY IT NOW

Build a small model

1. Make a Products table (ProductID, Name, Category) in Excel and load it.
2. Connect Products to Sales on ProductID in Model view.
3. Add a Category slicer and check that sales numbers change.

Key takeaways

- Facts in the middle, lookups around them.
- One-to-many: 1 on lookup, many on facts.
- Relationships make slicers work.
- Start with one fact table.

Quiz: 3 quick questions

1. Which is a fact table?

A Sales with Date, ProductID, Qty, Amount

B Products with Name and Category

C A list of colors

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2. Every chart shows the same total when you click a Category slicer. Likely cause?

A No relationship between Products and Sales

B Too many colors

C The file is too small

3. What does a star schema look like?

A A fact table in the middle with lookup tables around it

B All data in one giant table

C Tables in a circle with no links

Answers

1. **A. Sales with Date, ProductID, Qty, Amount** — Facts are repeated events with numbers.
2. **A. No relationship between Products and Sales** — Without a link, the filter can't reach Sales.
3. **A. A fact table in the middle with lookup tables around it** — It's the simplest, most common model.

PRACTICE TASK

Draw your model

On paper, draw your fact table in the middle and the lookup tables around it. Write the shared column on each line. Then build it in Model view.

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CHAPTER 5 · LESSON 3

Your First DAX Measures

Measures are the numbers on your dashboard: totals, counts, averages and percentages. DAX looks a little like Excel formulas.

Make a measure

1. **Select the table**
   In the Data pane, click the Sales table.

2. **New measure**
   Home (or Table tools) → New measure. A formula bar appears.

3. **Type the measure**
   Name = formula. Press Enter. The measure appears with a calculator icon.

4. **Format it**
   Set the format (currency, whole number, percentage) in the Measure tools ribbon.

Five starter measures

TOTAL SALES

```
Total Sales = SUM(Sales[Amount])
```

NUMBER OF ORDERS (ROWS)

```
Orders = COUNTROWS(Sales)
```

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AVERAGE ORDER — DIVIDE AVOIDS DIVIDE-BY-ZERO ERRORS

```
Average Order = DIVIDE([Total Sales], [Orders])
```

SALES PAID BY GCASH ONLY

```
GCash Sales = CALCULATE([Total Sales], Sales[Payment] = "GCash")
```

SHARE OF SALES PAID BY GCASH

```
GCash Share = DIVIDE([GCash Sales], [Total Sales])
```

New word: measure

A **measure** is a calculation that changes with the filters on the page. Total Sales shows the grand total on a card, but only Snacks when you click Snacks in a slicer. It's like asking the same question ("How much did we sell?") about whatever group you're looking at.

How to read DAX

Part	Means	Example
Table[Column]	A column inside a table	Sales[Amount]
[Measure]	An existing measure	[Total Sales]
SUM, COUNTROWS	Add up / count rows	SUM(Sales[Amount])
DIVIDE(a, b)	Safe division (no error if b is 0)	DIVIDE([Total Sales],[Orders])
CALCULATE(measure, filter)	The measure, but only where the filter is true	CALCULATE([Total Sales], Sales[Payment] = "GCash")

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Measures, not calculated columns (usually)

A calculated column adds a value to every row (like Excel). A measure calculates on the fly for whatever is shown. For totals, counts and percentages on a dashboard, use measures. Use a column only when you need a value per row, like a price band.

Build measures on measures

Average Order uses Total Sales and Orders. When you fix Total Sales once, every measure that uses it is fixed too — just like keeping prices in one place in Book 2.

QUICK RECAP

Measures are DAX calculations that respond to filters. Start with Total Sales (SUM), Orders (COUNTROWS), Average Order (DIVIDE), a filtered total (CALCULATE) and a share (DIVIDE). Use measures for dashboard numbers and build them on each other.

TRY IT NOW

Write your first measures

1. Create Total Sales, Orders and Average Order.
2. Format them as currency or whole numbers.
3. Put each on a Card visual and click a slicer to watch them change.

Key takeaways

- Name = formula.
- SUM, COUNTROWS, DIVIDE, CALCULATE cover a lot.
- Measures change with filters.
- Build measures on measures.

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Quiz: 3 quick questions

1. Why use DIVIDE instead of / ?

A DIVIDE doesn't show an error when dividing by zero

B It looks nicer

C It's faster to type

2. What does CALCULATE([Total Sales], Sales[Payment] = "GCash") return?

A Total sales paid by GCash only

B All sales

C The number of GCash users

3. You click "Snacks" in a slicer. What happens to the Total Sales card?

A It shows only Snacks sales

B It stays the grand total

C It disappears

Answers

1. **A. DIVIDE doesn't show an error when dividing by zero** — Safe division avoids broken cards.
2. **A. Total sales paid by GCash only** — CALCULATE applies the filter to the measure.
3. **A. It shows only Snacks sales** — Measures respond to filters (if the model is connected).

PRACTICE TASK

Your three key numbers

Write the three numbers from your Chapter 1 question as measures. Test each one: does the number match a quick SUM in Excel? If not, check your data types and relationships.

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CHAPTER 6 · LESSON 4

Choose Visuals and Design One Clear Page

The right chart makes the answer obvious. The wrong chart hides it. A simple recipe helps you lay out the whole page.

Pick the chart that matches the question

Question	Best visual	Example
How much in total?	Card	Total Sales: ₱1.2M
Going up or down over time?	Line chart	Sales per month
Which is biggest?	Bar chart, sorted	Top 10 products
What are the exact numbers?	Table or matrix	Sales by branch and month
Let readers choose a group	Slicer	Month, Branch, Category
Where?	Map (only if place matters)	Sales by province

Go easy on pie charts

Pie and donut charts are hard to read with more than 3 or 4 slices. A sorted bar chart is almost always clearer. Avoid 3D effects — they bend the numbers.

Add a visual

1. **Click an empty spot on the canvas**

   Then click a chart type in the Visualizations pane.

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2 **Fill the wells**

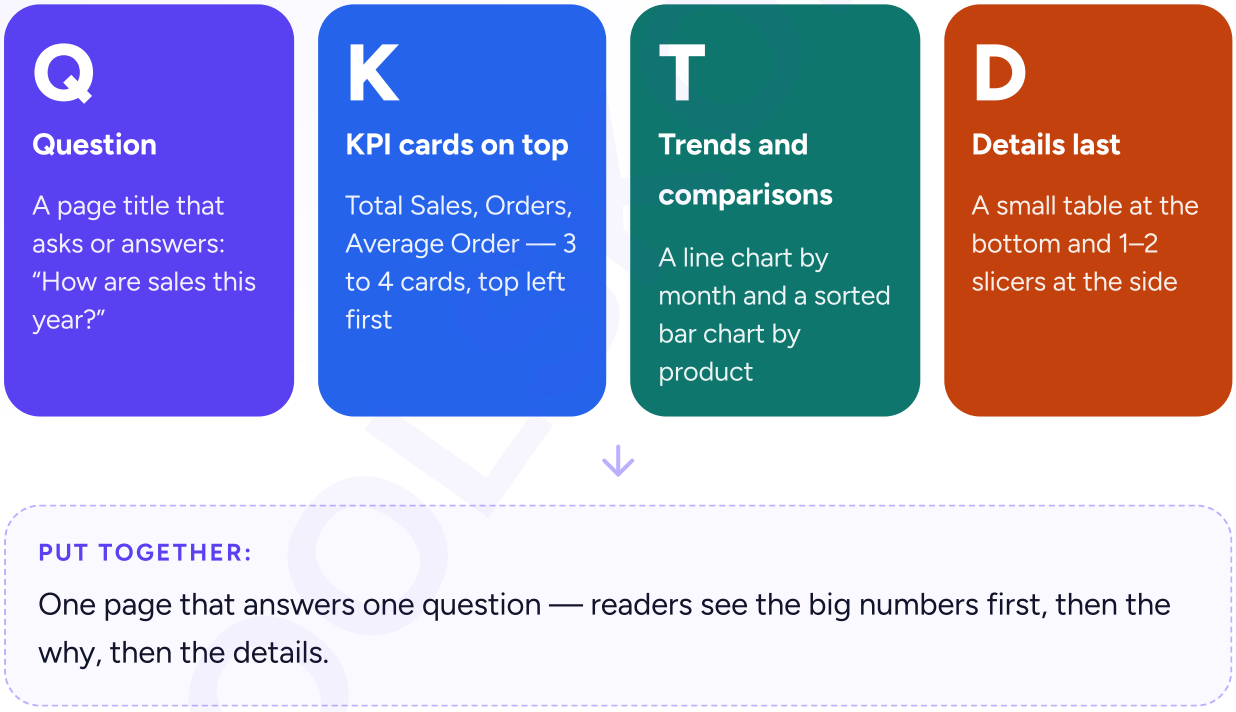
Drag fields into the boxes: for a bar chart, Product into Y-axis and Total Sales into X-axis.

3 **Sort and title it**

Use the … menu on the visual to sort. Rename the title to say what it shows: "Top 10 products by sales".

The Q-K-T-D page recipe

PICTURE 7 **Q-K-T-D: the dashboard page recipe**



People read a page like a book: top left first. Put the most important number there.

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Design rules from Book 1

Remember C-L-E-A-R from Canva Mastery: strong **contrast**, a simple **layout** grid, **easy** fonts, **aligned** visuals, and **room** to breathe. Use one main color plus grey, and one alert color (like red) only for problems.

PICTURE 8 **Busy vs clear dashboard**

BUSY PAGE

Readers get lost

- 12 visuals, 8 colors
- Two pie charts with 10 slices
- Titles like “Sum of Amount by Name”
- No clear first thing to look at

CLEAR PAGE

Readers get the answer

- 3 cards, 2 charts, 1 table
- One main color plus grey
- Titles that say the point
- Biggest number top left

Removing visuals often makes a dashboard more useful, not less.

Honest charts

Start bar charts at zero. Use the same scale when comparing. Show the date range on the page (“January–October 2026”). An honest chart builds trust; a tricky one destroys it.

QUICK RECAP

Match the visual to the question: cards for totals, lines for time, sorted bars for ranking, tables for exact numbers, slicers for choice. Avoid big pie charts and 3D. Lay out the page with Q-K-T-D: question, KPI cards, trends and comparisons, details. Use C-L-E-A-R design and honest charts.

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TRY IT NOW

Build your first page

1. Add a page title with your question.
2. Add 3 cards with your measures across the top.
3. Add a monthly line chart, a sorted bar chart and one slicer.

Key takeaways

- Cards, lines, bars, tables, slicers.
- Sorted bars beat big pies.
- Q-K-T-D: question, KPIs, trends, details.
- Honest charts start at zero.

Quiz: 3 quick questions

1. Which visual best shows sales going up or down by month?

A Line chart
B Pie chart
C Card

2. In Q-K-T-D, what goes at the top of the page?

A The question and the KPI cards
B A big table
C Nothing

3. Why avoid a pie chart with 10 slices?

A Slices are hard to compare — a sorted bar chart is clearer
B Pies are illegal
C Pies are too fast

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Answers

1. **A. Line chart** — Lines show change over time.
2. **A. The question and the KPI cards** — Readers look top left first.
3. **A. Slices are hard to compare — a sorted bar chart is clearer** — Bars make size differences easy to see.

PRACTICE TASK

The 5-second test

Show your page to someone for 5 seconds, then hide it. Ask: “What was the main point?” If they can’t say it, remove one visual or rewrite a title, and test again.

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CHAPTER 7 · LESSON 5

Share Safely, Refresh Monthly, and Use AI Wisely

A dashboard only helps when the right people see it — and only the right people. Let's share, refresh and use AI safely.

Ways to share

Way	Needs	Best for
Export to PDF (File → Export)	Power BI Desktop only (free)	Monthly reports, beginners
Publish to My workspace	Work or school account, free license	Viewing your own report online
Share in a workspace or app	Pro (or higher) for creator and viewers	Teams and companies
Export to PowerPoint	Power BI service	Meetings and presentations
Publish to web	Allowed by the admin — and PUBLIC	Only data that is truly public

Publish to web means everyone

Publish to web puts your report on the open internet. Anyone with the link can see it — no sign-in — and search engines or other people can share it further. Never use it for customer names, salaries, grades, phone numbers or any company data. When in doubt, export a PDF instead.

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Refresh: build once, update every month

1. **Keep the same file and column names**

   Add new rows to the same Excel table (or replace the file with one that has the same columns).

2. **Click Refresh**

   Home → Refresh. Power Query reruns every cleaning step, and all measures and visuals update.

3. **Check one number**

   Compare one total with your Excel file before you share.

Renamed a column? Refresh breaks

If someone renames “Amount” to “Total”, Power Query can’t find it. Keep column names the same, or fix the step in Power Query.

Use AI as a helper

Copilot in Power BI can suggest report pages, summarize data and help write DAX — but it needs a paid company setup (Fabric F2 or higher, or Premium P1 or higher). A Pro license alone isn’t enough, and trials aren’t supported. Most beginners won’t have it, and that’s okay: a free AI chatbot can explain a DAX measure or an error message in plain words.

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PICTURE 9 **Dashboard sharing traffic light**



Safe

Made-up practice data; PDFs sent to the people who need them; reports shared inside your company workspace with the right people.

Check first

Pasting column names or a sample into an AI chatbot; sharing with a whole group; DAX written by AI (test it against Excel totals).

Stop

Publish to web with private data; pasting real customer lists, salaries or grades into AI tools; sharing a report with personal data "just to show it off".

A dashboard can expose thousands of rows of personal data in one click. Share like it matters — because it does.

The Data Privacy Act

In the Philippines, the **Data Privacy Act of 2012** protects personal information. If your dashboard shows names, contact details, grades or salaries, show only what each reader needs, and keep the rest hidden or removed. When in doubt, ask your teacher, boss or the company's data protection officer.

QUICK RECAP

Beginners share PDFs; teams share in workspaces with Pro licenses; Publish to web is public, so never use it for private data. Refresh reruns every step — keep column names the same and check one number. Copilot needs paid capacity; a free chatbot can explain DAX. Follow the traffic light and the Data Privacy Act.

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TRY IT NOW

Share it safely

1. Export your report to PDF.
2. Add new rows to your source file and click Refresh.
3. Check one total against Excel, then export again.

Key takeaways

- PDF first; workspaces need Pro.
- Publish to web = public internet.
- Refresh reruns everything.
- Check AI-written DAX against real totals.

Quiz: 3 quick questions

1. Who can see a report shared with Publish to web?

A Anyone on the internet with the link, without signing in
B Only your boss
C Only you

2. You added new rows to your Excel file. How do you update the report?

A Click Refresh
B Rebuild everything
C Type the numbers into the cards

3. Does a Power BI Pro license alone give you Copilot?

A No — Copilot needs paid Fabric or Premium capacity
B Yes
C Only on phones

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Answers

1. **A. Anyone on the internet with the link, without signing in** — It's public — never use it for private data.
2. **A. Click Refresh** — Refresh reruns your Power Query steps and measures.
3. **A. No — Copilot needs paid Fabric or Premium capacity** — Copilot requires company capacity, not just Pro.

PRACTICE TASK

Your sharing checklist

Write a 5-line checklist for every report (for example: "Private data removed?", "Right people only?", "Not Publish to web?", "Totals checked?", "Date range shown?"). Use it before every share.

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CHAPTER 8

Your 14-Day Power BI Practice Plan

About 30–45 minutes a day for two weeks. By day 14, you'll have a clean, refreshable one-page dashboard.

Use your own data or make up a practice file: 100 rows of sales with Date, Product, Category, Qty, Amount and Payment. For private data like grades or salaries, use made-up numbers.

PICTURE 10 **The 14-day Power BI plan**



Each block builds on the one before. Your day-14 dashboard becomes your first portfolio piece.

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Day	Task (about 30–45 minutes)	Done?
1	Install Power BI Desktop. Find the three views and the panes.	☐
2	Write your dashboard question and the 3 numbers that answer it.	☐
3	Get data from Excel or CSV and open Power Query.	☐
4	Set data types, rename columns, remove extra columns.	☐
5	Trim text, remove blanks and duplicates. Close & Apply.	☐
6	Add a Products lookup table and connect it in Model view.	☐
7	Add a Calendar table (Date, Month, Year) and connect it.	☐
8	Write Total Sales, Orders and Average Order.	☐
9	Write one CALCULATE measure and one share (DIVIDE).	☐
10	Add 3 cards, a line chart and a sorted bar chart.	☐
11	Lay out the page with Q-K-T-D and C-L-E-A-R.	☐
12	Add one slicer. Do the 5-second test with a friend.	☐
13	Add new rows to the source, Refresh, check one total.	☐
14	Run the sharing checklist. Export to PDF.	☐

Bonus exercises

1 **Folder of files**

Put 3 monthly CSV files in one folder and use Get data → Folder to combine them.

2 **Tooltip page**

Add a small extra page that appears when readers hover over a bar.

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3 **Explain one measure**

Ask a free AI chatbot to explain your CALCULATE measure in simple words, then check it with Excel.

4 **Microsoft Learn**

Take one free Power BI module on Microsoft Learn and write 3 things you learned.

A number looks wrong?

Check in this order: data types in Power Query, relationships in Model view, then the measure. Most “wrong totals” come from the first two.

QUICK RECAP

Days 1–3: install, question, get data. Days 4–5: clean with Power Query. Days 6–7: model and date table. Days 8–10: measures and visuals. Days 11–14: design, refresh and share safely.

TRY IT NOW

Start today

1. Copy the 14-day table into a sheet or notebook.
2. Do Day 1 now.
3. Set a daily reminder.

Key takeaways

- Question first, then data.
- Clean → model → measure → visualize.
- Wrong number? Types, relationships, measure.
- Your day-14 dashboard is a portfolio piece.

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Quiz: 3 quick questions

1. What do you do on day 2?

A Write your dashboard question and its 3 numbers

B Publish to web

C Buy Premium

2. A total looks wrong. What do you check first?

A Data types in Power Query

B The chart colors

C The font

3. How do you combine 3 monthly CSV files?

A Get data → Folder

B Copy and paste by hand every month

C Retype them

Answers

1. **A. Write your dashboard question and its 3 numbers** — The question decides everything else.
2. **A. Data types in Power Query** — Text numbers and wrong dates cause most errors.
3. **A. Get data → Folder** — A folder source combines files and refreshes automatically.

PRACTICE TASK

Complete the 14 days

Follow the plan and tick each box. On day 14, write: your question, your 3 measures, one problem you fixed, and who would find your dashboard useful.

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CHAPTER 9

Common Power BI Mistakes (and Easy Fixes)

Most beginner problems come from a few habits. Fix these, and people will trust your numbers.

Check your report against this table.

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Mistake	Why it hurts	Easy fix
Clicking Load instead of Transform	Messy data goes straight into the report	Transform Data; clean first
Numbers stored as text	Can’t add them; wrong totals	Set data types in Power Query
No relationships	Slicers don’t filter; same total everywhere	Connect tables in Model view
Totals as calculated columns	Big, slow model; confusing results	Use measures
Dividing with /	Errors when the bottom is zero	Use DIVIDE
Too many visuals and colors	Readers don’t know where to look	Q-K-T-D; one main color
Unclear titles	“Sum of Amount by Name” means nothing	Titles that say the point
Renaming source columns	Refresh breaks	Keep names the same
Publish to web with private data	Anyone on the internet can see it	PDF or secure sharing
Trusting AI DAX without checking	Wrong numbers look official	Compare with an Excel total

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PICTURE 11 **Shaky vs trusted**

SHAKY REPORT

Nobody trusts the numbers

- Text amounts, no relationships
- Totals typed by hand
- 12 visuals, rainbow colors
- Shared with Publish to web

TRUSTED REPORT

Decisions happen faster

- Clean types, simple star model
- Measures with DIVIDE
- Q-K-T-D page, clear titles
- PDF or secure workspace

A trusted report takes a little more care at the start and saves hours of arguments later.

The trust test

Pick one number on your dashboard and check it by hand in Excel. If it matches, you can share with confidence. If not, check types, relationships, then the measure.

QUICK RECAP

Common mistakes: loading without cleaning, text numbers, no relationships, calculated columns for totals, / instead of DIVIDE, busy pages, unclear titles, renamed source columns, Publish to web with private data and unchecked AI DAX. Each has an easy fix.

TRY IT NOW

Audit your report

1. Check every column's data type.
2. Fix at least two mistakes from the table.
3. Run the trust test on one number.

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Key takeaways

- Transform first; set data types.
- Connect tables; use measures and DIVIDE.
- Fewer visuals, clearer titles.
- Never Publish to web with private data.

Quiz: 3 quick questions

1. Your slicer doesn't change any numbers. Likely cause?

A Missing relationship between tables

B Too few colors

C The page is too big

2. Why use DIVIDE instead of / ?

A It avoids errors when dividing by zero

B It looks nicer

C It's required for SUM

3. What is the trust test?

A Checking one dashboard number by hand in Excel

B A password check

C A typing speed test

Answers

1. **A. Missing relationship between tables** — Filters travel through relationships.
2. **A. It avoids errors when dividing by zero** — Safe division keeps cards working.
3. **A. Checking one dashboard number by hand in Excel** — One verified number builds confidence.

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PRACTICE TASK

Your report rules

Write 5 rules for every report you build (for example, “Transform before load”, “Measures, not columns”, “One main color”, “Check one number”, “No Publish to web for private data”). Keep them next to your screen.

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CHAPTER 10

Real-Life Examples: Dashboards That Help

These five example stories are based on common beginner projects (names are made up). Look for the habits, not the luck.

C

Carlo, 45

Minimart owner, Laguna

THE PROBLEM

Every month he and his partner argued over a long Excel file.

WHAT CARLO TYPED

```
One page: Q “How are sales this year?”, cards for Total Sales,
Orders and Average Order, a monthly line, Top 10 products bar.
Average Order = DIVIDE([Total Sales], [Orders]).
```

THE RESULT

Meetings now start with decisions. He adds the month’s rows, clicks Refresh and exports a PDF in five minutes.

Lesson: One question, one clear page — and Refresh does the monthly work.

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Bea, 24
Junior accounting staff, Makati

THE PROBLEM

Expense files from three branches had different spellings and extra spaces, so totals never matched.

WHAT BEA TYPED

```
Get data → Folder for the three files. Power Query: Trim, set types, Replace Values for branch names, Remove Duplicates.
```

THE RESULT

Totals matched for the first time. Her boss asked her to own the monthly expense report.

Lesson: Clean once in Power Query; let Refresh repeat it.

Sir Paolo, 36
Senior high school teacher, Cebu

THE PROBLEM

He wanted to see which topics his classes found hardest, without exposing any student's scores.

WHAT SIR PAOLO TYPED

```
Made student IDs instead of names. Measure: Avg Score = AVERAGE(Scores[Score]). Bar chart of Avg Score by Topic; slicer for Section. Shared as a PDF with the department head only.
```

THE RESULT

The department planned review lessons for the two weakest topics. No names left his computer.

Lesson: Answer the question without showing personal data.

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N

Nina, 28

Online seller, Davao

THE PROBLEM

She couldn't tell which payment method and which product made the most money.

WHAT NINA TYPED

```
GCash Sales = CALCULATE([Total Sales], Sales[Payment] = "GCash")
and GCash Share = DIVIDE([GCash Sales], [Total Sales]). Sorted bar
of sales by product; card for GCash Share.
```

THE RESULT

She found 70% of sales came through GCash and moved her best-sellers to the top of her shop.

Lesson: CALCULATE and DIVIDE turn a question into a number you can act on.

R

Ramon, 33

Warehouse supervisor, Pampanga

THE PROBLEM

A teammate wanted to post the stock report online "so everyone can see it" — including supplier prices.

WHAT RAMON TYPED

```
Chose secure sharing in the company workspace with Pro licenses
for the team, removed price columns from the managers' page, and
kept Publish to web off.
```

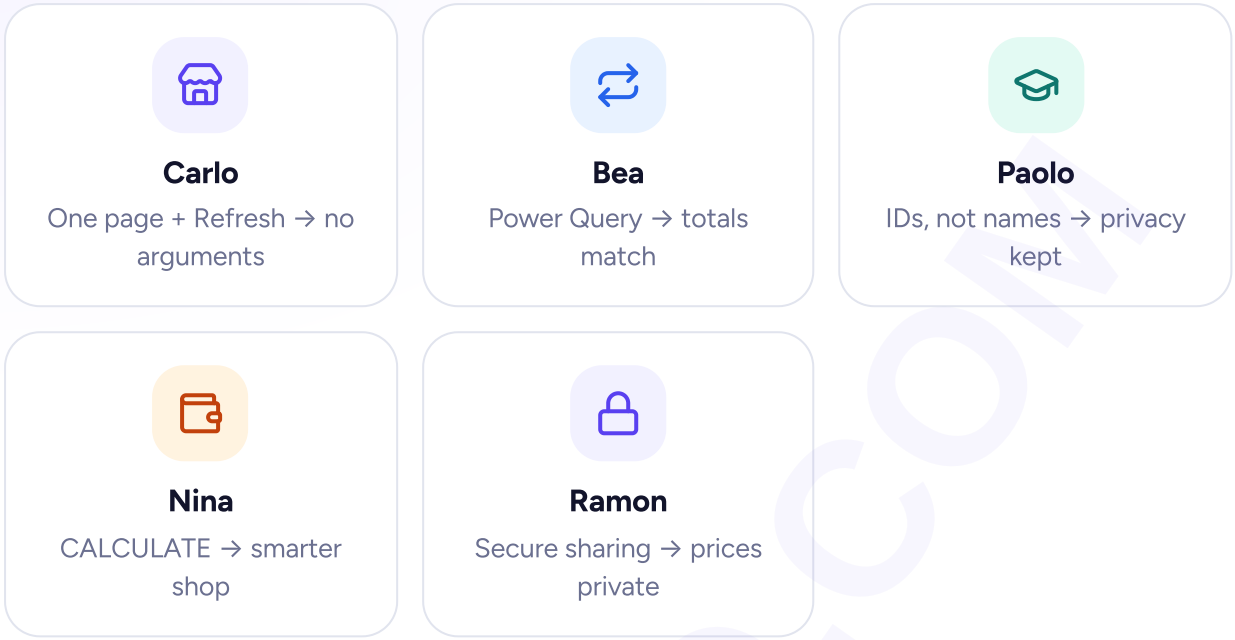
THE RESULT

The right people saw stock levels daily. Prices stayed private.

Lesson: Share with the right people — never with the whole internet by accident.

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PICTURE 12 **Five dashboards, same habits**



All of them started with a question, cleaned the data, kept the page simple and shared safely.

What these stories have in common

They asked one clear question, cleaned data in Power Query, used a few simple measures, kept the page uncluttered, checked one number, and shared only with the people who needed it.

QUICK RECAP

One page and Refresh end monthly arguments; Power Query makes messy files match; IDs instead of names protect privacy; CALCULATE and DIVIDE answer real business questions; secure sharing keeps private data private.

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TRY IT NOW

Your first real dashboard

1. Choose one report someone makes by hand every month.
2. Rebuild it in Power BI Desktop with Q-K-T-D.
3. Share it as a PDF and ask for one improvement.

Key takeaways

- Question first.
- Clean once, refresh forever.
- Protect personal data.
- Share with the right people only.

Quiz: 3 quick questions

1. How did Bea make three branches' totals match?

A Cleaned and combined the files in Power Query

B Typed the totals by hand

C Deleted one branch

2. How did Sir Paolo protect students?

A Used IDs instead of names and shared a PDF with the department head only

B Used Publish to web

C Posted names in a group chat

3. What did Ramon keep turned off?

A Publish to web

B Refresh

C Slicers

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Answers

1. **A. Cleaned and combined the files in Power Query** — Trim, types, replace values and remove duplicates fixed the mess.
2. **A. Used IDs instead of names and shared a PDF with the department head only** — Show only what readers need.
3. **A. Publish to web** — Supplier prices must never be public.

PRACTICE TASK

Your dashboard story card

Write your own story card: your question, the data you cleaned, your key measures, how you shared it safely, and the decision someone made because of it.

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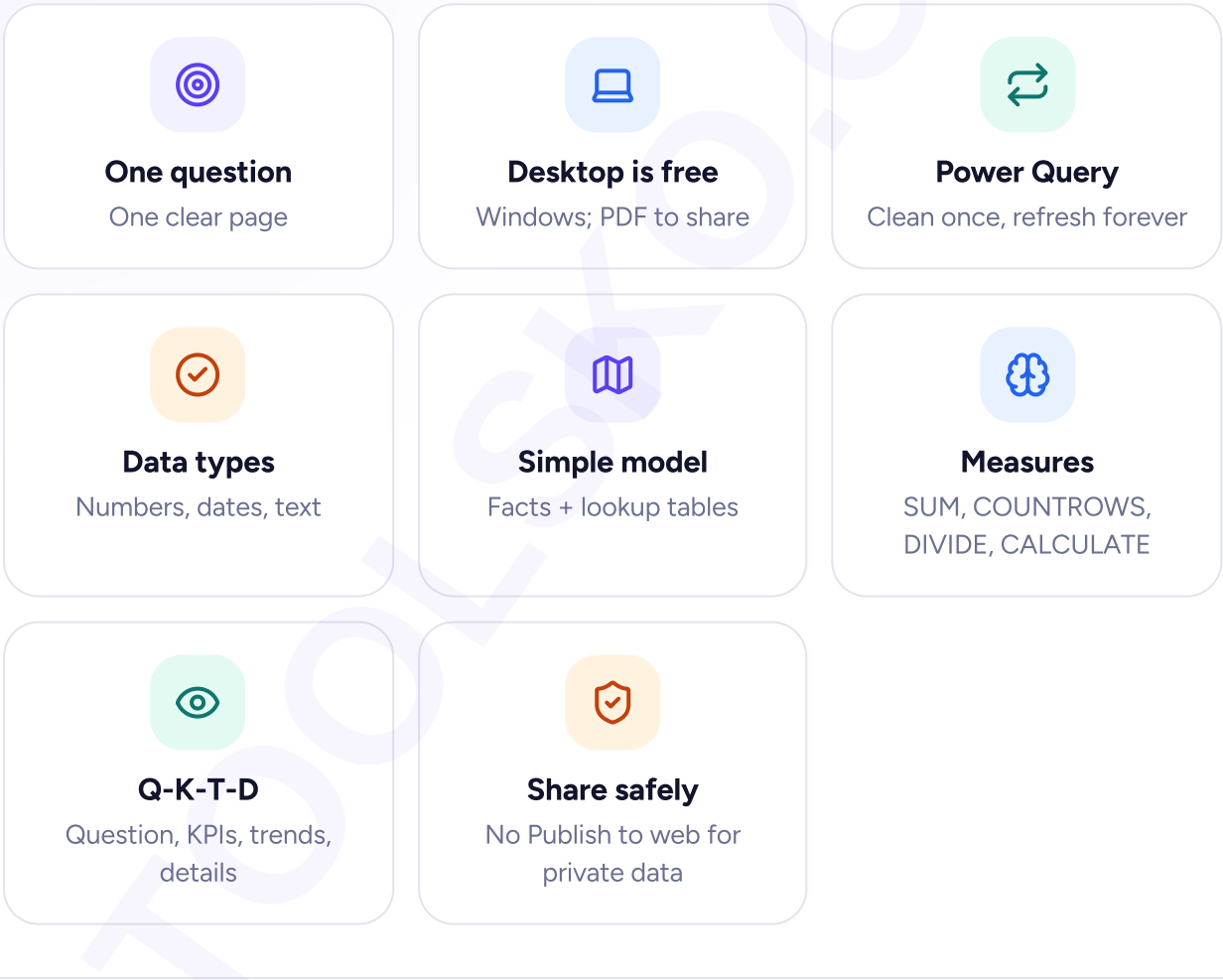
THE END

Quick Summary

Everything important, on one page.

The whole book on one page. Keep it next to your screen.

PICTURE 13 **Cheat sheet: Power BI in 8 cards**



Eight habits for dashboards people understand and trust.

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Remember	In one line
The big rule	One question, one clear page.
Setup	Desktop free on Windows; service needs a work or school email; sharing needs Pro.
Clean	Transform first: types, names, trim, blanks, duplicates.
Model	Facts in the middle, lookups around; one-to-many.
Measures	Total Sales = SUM(Sales[Amount]); use DIVIDE; build on measures.
Page	Q-K-T-D with C-L-E-A-R design and honest charts.
Always	Check one number; protect personal data; Publish to web only for public data.

You can build dashboards now

You can clean data, connect tables, write measures, design a clear page, refresh it and share it safely. Turn one hand-made monthly report into a Power BI page this month.

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WHAT'S NEXT

Your Next Learning Path

You finished Book 5. Here is where to go from here.

This is **Book 5**, the last book of the **Digital Skills** series. You did it — here is the whole path:

PICTURE 14 **Your Digital Skills path — complete**



Design, spreadsheets, teamwork, organization and dashboards: five skills employers and clients ask for.

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What to do next

Next step	Why
Finish the 14-day plan	A refreshable one-page dashboard is a real portfolio piece.
Free Microsoft Learn training	Self-paced Power BI modules go deeper into Power Query, modeling and DAX.
Aim for PL-300 (later)	The exam leads to Microsoft Certified: Power BI Data Analyst Associate. It covers preparing, modeling and visualizing data and deploying reports, and is renewed yearly with a free online test.
Review the series	Excel (Book 2) and Google Sheets (Book 3) for clean data; Canva (Book 1) for design; Notion (Book 4) to plan your projects.
Earn with your skill	Dashboard and report building are common VA and freelance tasks (Make Money Online series, adults 18+).

One last tip

Buttons change every month; good habits don't. Ask a clear question, clean your data, keep the page simple, check one number, and share safely — in Power BI or any dashboard tool.

Free ToolsKo tools for this book

Put what you learned to work. These tools are free on toolsko.com, need no sign-up, and most work right in your browser.

CSV Cleaner & Deduper
Clean a messy export before you load it into Power BI.
toolsko.com/csv-cleaner ↗

Remove Duplicate Lines
Find repeated product or branch names in a pasted list.
toolsko.com/remove-duplicate-lines ↗

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CSV to HTML / Markdown Table

Turn a small results table into a neat table for a report or website.

toolsko.com/csv-to-table ↗

Percentage Calculator

Double-check a share or growth percentage from your dashboard.

toolsko.com/percentage-calculator ↗

Average Calculator

Check an average measure by hand — the trust test.

toolsko.com/average-calculator ↗

Profit Margin Calculator

Check the margin numbers before you build a margin measure.

toolsko.com/profit-margin-calculator ↗

Break-Even Calculator

Add a break-even target to a small-business dashboard.

toolsko.com/break-even-calculator ↗

Days Between Dates

Check date ranges and days-between results.

toolsko.com/date-difference-calculator ↗

Savings Goal Calculator

Plan a goal you can track with a KPI card.

toolsko.com/savings-goal-calculator ↗

Time Zone Converter

Plan report deadlines with teammates abroad.

toolsko.com/time-zone-converter ↗

QR Code Generator

Add a QR code linking to your secure report page in a printed handout.

toolsko.com/qr-code-generator ↗

Words to know

Power BI	Microsoft's tool for turning data into reports and dashboards.

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Dashboard	One page of numbers and charts that answers a question at a glance.
Power BI Desktop	The free Windows app where you build reports.
Power BI service	The website where reports are shared (needs a work or school email).
Power BI Pro	A paid license needed to share reports with others.
Report (.pbix)	A Power BI file with one or more pages of visuals.
Visual	One chart, card, table, map or slicer.
Power Query	The cleaning tool that records every step so it can repeat them.
Applied steps	The list of cleaning steps Power Query reruns on refresh.
Data type	Whether a column holds numbers, dates or text.
Fact table	A table of repeated events with numbers, like sales.
Lookup (dimension) table	A table of descriptions, one row each, like products.
Relationship	A link between two tables through a shared column.
Measure (DAX)	A calculation that changes with the filters on the page.
Slicer	A filter on the page that readers click.
Publish to web	A public link anyone on the internet can open — never for private data.

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Where the facts come from

1. Microsoft Learn: Get Power BI Desktop
2. Microsoft Learn: Sign up for Power BI as an individual (work or school email)
3. Microsoft: Power BI pricing
4. Microsoft Learn: Power BI licensing for users
5. Microsoft Learn: Publish to web from Power BI
6. Microsoft Learn: Copilot in Power BI overview
7. Microsoft Learn: Understand star schema and its importance for Power BI
8. Microsoft Learn: DIVIDE function (DAX)
9. Microsoft Learn: Microsoft Certified: Power BI Data Analyst Associate (PL-300)
10. National Privacy Commission (Philippines): Data Privacy Act of 2012

Requirements, account rules, prices (in US dollars), sharing rules and AI requirements were checked on November 21, 2026. Microsoft updates Power BI every month, so some buttons may have different names or places on your screen — look for the same idea. Microsoft and Power BI are trademarks of Microsoft Corporation; ToolsKo is not connected to Microsoft. This book is general information, not legal advice. Written by ToolsKo Learn · toolsko.com/learn

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DIGITAL SKILLS

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Book 2	Excel for Beginners
Book 3	Google Sheets
Book 4	Notion
Book 5	**Power BI Basics — this book**

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