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        POWER BI DESKTOP - CHARTS COMPLETE TEACHING GUIDE
              Column | Stacked Column | Pie | Donut | Funnel | Ribbon
              Keep Only & Exclude | View Data & Export
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FILE: Power_BI_Charts_Teaching.xlsx
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7 Worksheets with simple, clear data for each chart type
Ready to use in Power BI Desktop
Perfect for teaching and learning

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CHART 1: COLUMN CHART
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What is Column Chart?
  • Vertical bars representing values
  • Compares values across categories
  • Best for: Comparing quantities
  • Use: Sales by product, performance by quarter
  • Example: Product sales comparison

Dataset (Column_Chart worksheet):
  Column A: Product (Laptop, Desktop, Tablet, Phone, Monitor, Keyboard, Mouse,
Headset)
  Column B: Sales_Q1 (50000, 40000, 30000, 80000, 25000, 15000, 12000, 18000)
  Column C: Sales_Q2 (55000, 42000, 32000, 85000, 26000, 16000, 13000, 19000)
  Column D: Sales_Q3 (60000, 45000, 35000, 90000, 28000, 17000, 14000, 20000)
  Column E: Sales_Q4 (70000, 50000, 40000, 100000, 32000, 20000, 16000, 23000)

How to Create Column Chart in Power BI:
  1. Load Excel file (Power_BI_Charts_Teaching.xlsx)
  2. Go to Column_Chart worksheet
  3. Click Visualizations → Column Chart
  4. Drag "Product" to Axis
  5. Drag "Sales_Q1" to Values (can add Q2, Q3, Q4)
  6. Chart created!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
  • Text: "Product Sales by Quarter"
  • Font Size: 14
  • Color: Dark Blue

Data Labels:
  • Add Value Labels (show numbers on bars)
  • Font Size: 10
  • Number Format: Thousands (50K, 55K)

Colors:
  • One Color (gradient from light to dark)
  • Or different color per quarter
  • Keep colors professional (blue, green, orange)

Axis Formatting:
  • X-Axis Title: "Products"
  • Y-Axis Title: "Sales Amount"
  • Y-Axis Range: Auto (0 to 100000+)

Legend:
  • Position: Right or Bottom
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- Show: Q1, Q2, Q3, Q4

Gridlines:
- Enable horizontal lines (helps read values)
- Color: Light gray

CHART 2: STACKED COLUMN CHART

What is Stacked Column Chart?
- Vertical bars with segments (stacks)
- Shows composition and total
- Best for: Showing parts of a whole
- Use: Sales by region and product, budget breakdown
- Example: Product sales composition per region

Dataset (Stacked_Column_Chart worksheet):
Column A: Region (North, South, East, West, Central)
Column B: Product_A (50000, 60000, 45000, 70000, 40000)
Column C: Product_B (30000, 40000, 35000, 45000, 25000)
Column D: Product_C (20000, 25000, 18000, 30000, 15000)

How to Create Stacked Column Chart in Power BI:
1. Load Excel file
2. Go to Stacked_Column_Chart worksheet
3. Click Visualizations → Stacked Column Chart
4. Drag "Region" to Axis
5. Drag "Product_A" to Values
6. Drag "Product_B" to Values
7. Drag "Product_C" to Values
8. Chart shows stacked bars!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
- Text: "Sales by Region and Product"
- Font Size: 14
- Color: Dark Green

Data Labels:
- Add labels: Show on each segment
- Font Size: 9 (smaller for segments)
- Format: Percentage or Value

Colors:
- Different color per product
- Product_A: Blue
- Product_B: Orange
- Product_C: Green
- Keep distinct and professional

Axis Formatting:
- X-Axis Title: "Regions"
- Y-Axis Title: "Total Sales"
- Y-Axis Range: Auto

Legend:
- Position: Right
- Labels: Product_A, Product_B, Product_C

Data:
- Show as Stacked (not 100% stacked)
- Better for absolute values

CHART 3: PIE CHART

What is Pie Chart?
- Circular chart divided into slices
- Shows parts of a whole (percentage)
- Best for: Showing composition, market share
- Use: Department employees, budget allocation
- Example: Employees by department

Dataset (Pie_Chart worksheet):
Column A: Department (HR, IT, Finance, Sales, Operations, Marketing)
Column B: Employees (25, 45, 30, 50, 35, 20)
Total: 205 employees

How to Create Pie Chart in Power BI:
1. Load Excel file
2. Go to Pie_Chart worksheet
3. Click Visualizations → Pie Chart
4. Drag "Department" to Legend
5. Drag "Employees" to Values
6. Pie chart created!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
- Text: "Employees by Department"
- Font Size: 14
- Color: Black

Data Labels:
- Show: Category names + Percentages
- Example: "Sales 24.4%" (visible on pie)
- Font Size: 10

Colors:
- Different color per department
- Use distinct colors
- HR: Blue, IT: Green, Finance: Orange, etc.

Legend:
- Position: Right or Bottom
- Show all departments

Details/Callouts:
- Show percentage (most important)
- Option: Show value counts
- Makes chart informative

CHART 4: DONUT CHART

What is Donut Chart?
- Circular chart like pie but with hollow center
- Shows parts of a whole
- Same as Pie but cleaner look
- Best for: Similar to pie (budget, market share)
- Use: Visual appeal is better

Dataset (Donut_Chart worksheet):
Column A: Category (Infrastructure, Staff Training, Technology, Marketing,

Operations)
  Column B: Budget_Allocation (250000, 180000, 320000, 150000, 200000)
  Total Budget: 1,100,000

How to Create Donut Chart in Power BI:
  1. Load Excel file
  2. Go to Donut_Chart worksheet
  3. Click Visualizations → Donut Chart
  4. Drag "Category" to Legend
  5. Drag "Budget_Allocation" to Values
  6. Donut chart created!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
  • Text: "Budget Allocation by Category"
  • Font Size: 14
  • Color: Dark Blue

Data Labels:
  • Show: Category names + Dollar amounts
  • Example: "Infrastructure $250K"
  • Font Size: 10
  • Or show as percentages

Colors:
  • Different color per category
  • Infrastructure: Blue
  • Staff Training: Green
  • Technology: Orange
  • Marketing: Red
  • Operations: Purple

Legend:
  • Position: Right
  • Show all categories

Center Text (Donut hole):
  • Optional: Add text like "Total Budget: $1.1M"
  • Or leave blank

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CHART 5: FUNNEL CHART
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What is Funnel Chart?
  • Shows progressive reduction
  • Stages from top to bottom
  • Each stage smaller than previous
  • Best for: Sales pipeline, conversion stages
  • Use: Customer journey, process stages

Dataset (Funnel_Chart worksheet):
  Column A: Sales_Stage (Prospects, Leads, Qualified, Negotiation, Won)
  Column B: Leads (1000, 750, 500, 300, 150)

Progression:
  Prospects: 1000 (100%)
  Leads: 750 (75%)
  Qualified: 500 (50%)
  Negotiation: 300 (30%)
  Won: 150 (15%)

How to Create Funnel Chart in Power BI:

1. Load Excel file
2. Go to Funnel_Chart worksheet
3. Click Visualizations → Funnel Chart
4. Drag "Sales_Stage" to Category
5. Drag "Leads" to Values
6. Funnel chart shows stages!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
- Text: "Sales Pipeline Funnel"
- Font Size: 14
- Color: Dark Blue

Data Labels:
- Show: Count (number of leads)
- Example: "750" on Leads stage
- Font Size: 11 (larger for clarity)
- Show Percentage (75%, 50%, 30%)

Colors:
- One color with gradient (dark to light)
- Or different color per stage
- Green (winning) to Yellow/Red (losing)

Axis Formatting:
- Y-Axis Title: "Sales Stage"
- Show stages clearly

Default Color:
- Light Blue (standard)
- Professional and clear

CHART 6: RIBBON CHART

What is Ribbon Chart?
- Shows ranking changes over time
- Lines/ribbons connect ranks
- Best for: Tracking rank changes
- Use: Top products over time, competitor ranking
- Shows who's winning in each period

Dataset (Ribbon_Chart worksheet):
Column A: Month (Jan, Feb, Mar, Apr, May, Jun)
Column B: Product_A (45000, 48000, 52000, 50000, 55000, 58000)
Column C: Product_B (35000, 36000, 38000, 40000, 42000, 45000)
Column D: Product_C (25000, 27000, 30000, 32000, 35000, 38000)

Ranking Changes:
Jan: Product_A > Product_B > Product_C
Feb: Product_A > Product_B > Product_C
... consistent or changes visualized

How to Create Ribbon Chart in Power BI:
1. Load Excel file
2. Go to Ribbon_Chart worksheet
3. Click Visualizations → Ribbon Chart
4. Drag "Month" to Axis
5. Drag "Product_A" to Values
6. Drag "Product_B" to Values
7. Drag "Product_C" to Values
8. Ribbon chart shows rankings!

IMPORTANT FORMATTING OPTIONS (Keep Simple):

Title Formatting:
- Text: "Product Rankings Over Time"
- Font Size: 14
- Color: Dark Blue

Data Labels:
- Show: Product names
- Show: Values (sales amounts)
- Font Size: 10

Colors:
- Different color per product
- Product_A: Blue
- Product_B: Orange
- Product_C: Green
- Ribbons use these colors

Legend:
- Position: Bottom or Right
- Shows Product_A, Product_B, Product_C

Ribbon Style:
- Clean lines connecting rankings
- Shows transitions clearly

FEATURE 7: KEEP ONLY & EXCLUDE

What is Keep Only?
- Filters chart to show only selected items
- Isolates specific data for focus
- Removes other items temporarily
- Use: Show top performers, specific region

What is Exclude?
- Removes specific items from view
- Opposite of Keep Only
- Hides unwanted data
- Use: Hide low performers, remove outliers

Dataset (Keep_Exclude_View worksheet):
Column A: Sales_Rep (8 sales representatives)
Column B: Region (North, South, East, West, Central)
Column C: Q1_Sales (various amounts)
Column D: Q2_Sales (various amounts)
Column E: Status (Active/Inactive)

How to Use Keep Only:
Example: Keep Only North and West regions
1. Create chart with Region and Sales
2. Right-click on data point/item
3. Select "Keep Only" (or similar option)
4. Choose: North
5. Chart updates to show only North region
6. Other regions hidden (temporarily)

How to Use Exclude:
Example: Exclude Inactive sales reps
1. Create chart with Sales_Rep and Status
2. Right-click on Inactive

3. Select "Exclude"
4. Inactive reps hidden
5. Chart shows only Active reps

Applications:
- Show top 5 products
- Hide underperformers
- Focus on specific region
- Analyze Active vs Inactive
- Compare best performers
- Remove data entry errors

FEATURE 8: VIEW DATA & EXPORT

What is View Data?
- See underlying data for chart
- Shows table of values used
- Verify chart correctness
- See actual numbers vs visualized
- Useful for: Debugging charts, understanding data

What is Export?
- Download/export chart or data
- Formats: Image (PNG), Data (CSV), Power Point
- Use: Share reports, create presentations
- For: Stakeholders, documentation

How to View Data:
1. Click on any chart
2. Look for "..." (three dots menu)
3. Select "View Data"
4. Table appears showing:
   - Categories (Product, Region, etc.)
   - Values (Sales amounts)
   - Any calculations used
5. Can copy data

Example (From Column Chart):
View Data would show:

Product	Sales_Q1	Sales_Q2	Sales_Q3	Sales_Q4
Laptop	50000	55000	60000	70000
Desktop	40000	42000	45000	50000

... and so on

How to Export Chart:
1. Click on chart
2. Look for "..." (three dots menu)
3. Export Option:
   - Export as Image (PNG) - saves chart image
   - Export Data (CSV) - saves underlying data
   - PowerPoint - adds to presentation

Export Options by Format:

PNG Image Export:
- File Size: Small
- Use: Emails, documents, presentations
- Quality: High resolution
- Format: Image (can't edit)

CSV Export:
- File Size: Very Small

- Use: Excel, analysis, sharing raw data
- Format: Spreadsheet (editable)
- Content: Numbers only, no visualization

PowerPoint Export:
- File Size: Depends on report
- Use: Presentations, stakeholder meetings
- Format: Embedded in PowerPoint
- Quality: Good

When to Use Each:

View Data - Use when:
- Verifying chart accuracy
- Debugging incorrect results
- Need to see exact numbers
- Checking data calculations
- Sharing detailed numbers

Export Image - Use when:
- Including in presentations
- Sharing via email
- Creating reports
- Need visual representation
- Quick sharing with stakeholders

Export CSV - Use when:
- Need to analyze further
- Share with Excel users
- Create backup data
- Import to other tools
- Data manipulation needed

Export PowerPoint - Use when:
- Creating presentations
- Stakeholder meetings
- Board presentations
- Quick slide creation
- Multiple chart compilation

SIMPLE FORMATTING SUMMARY (FOR ALL CHARTS)

Basic Formatting (Apply to all charts):

Title:
- Add clear, descriptive title
- Font Size: 12-14
- Color: Dark (Black or Dark Blue)
- Example: "Sales by Product Quarter"

Data Labels:
- Show values on chart
- Font Size: 10
- Format: Thousands (50K) or Currency ($50,000)
- Only show if chart not too crowded

Colors:
- Consistent color scheme
- Professional colors (Blue, Green, Orange)
- Different colors per category
- Consider color-blind friendly

Legend:
- Show what colors mean
- Position: Right or Bottom
- Font Size: 10

Background:
- White background (clean)
- No background color (standard)
- Transparent if embedding

TEACHING SEQUENCE RECOMMENDED

Suggested Order (Easy to Advanced):

1. Column Chart (Foundation)
   - Simplest chart type
   - Compares values clearly
   - Start here

2. Pie Chart (Simple)
   - Shows composition
   - Easy to understand percentages
   - Build from Column

3. Donut Chart (Similar to Pie)
   - Same concept as Pie
   - Just different appearance
   - Quickly covered

4. Stacked Column Chart (Intermediate)
   - More complex than Column
   - Shows composition + total
   - Students familiar with Column

5. Funnel Chart (Interesting)
   - Shows progression
   - Different shape/concept
   - Useful for sales teams

6. Ribbon Chart (Advanced)
   - Most complex
   - Shows ranking changes
   - Finish with this

7. Keep Only & Exclude (Feature)
   - Works with any chart
   - Teach after chart types
   - Filtering concepts

8. View Data & Export (Feature)
   - Works with any chart
   - Last feature to cover
   - Practical skills

HOW TO USE THE DATASETS

For Each Chart Type:

Step 1: OPEN IN POWER BI
1. Open Power BI Desktop

2. File → Open → Select Excel file
3. Power_BI_Charts_Teaching.xlsx loads
4. Select worksheet for that chart

Step 2: CREATE VISUALIZATION
1. Click Visualizations pane
2. Select chart type
3. Drag columns to appropriate areas
4. Chart appears!

Step 3: FORMAT (Keep Simple!)
1. Click Format icon (brush icon)
2. Title → Text, Size, Color
3. Data Labels → On/Off, Format
4. Colors → Choose scheme
5. Legend → Position, Show
6. Axis → Add titles

Step 4: PREVIEW & TEACH
1. Show chart to students
2. Explain what it shows
3. Demonstrate formatting
4. Let students practice

Perfect for teaching Power BI Charts! 🎓📊✨

All datasets ready to use
All chart types covered
Simple formatting explained
Teaching sequence recommended
Ready for immediate instruction
