

Math 112 | Assignment 3: Survey Results & Conditional Analysis

STUDENT ASSIGNMENT SHEET — SPREADSHEET ANALYSIS

Objective: Build a survey analysis model in Google Sheets or Microsoft Excel. You will enter 15 customer feedback responses, compute overall summary statistics using =COUNTA(), =AVERAGE(), and conditional ratios (=COUNTIF() / COUNTA()), construct a score frequency distribution table using absolute references (\$), create a distribution pie chart, and apply alternating row colors for professional formatting.

1. Raw Survey Data Table

Enter the following 15 survey records exactly as shown into cells **A1:F16** of your spreadsheet.

Respondent ID (A)	Age (B)	Gender (C)	Satisfaction Score (1-5) (D)	Would Recommend (E)	Comments (F)
R01	22	Female	4	Yes	Great service!
R02	19	Male	5	Yes	Loved it
R03	25	Female	2	No	Could be better
R04	21	Non-binary	3	Yes	Average experience
R05	30	Male	5	Yes	Excellent support!
R06	18	Female	1	No	Unsatisfied
R07	24	Male	4	Yes	Good overall
R08	27	Female	5	Yes	Super fast response
R09	20	Male	3	No	Okay quality
R10	22	Female	4	Yes	Would visit again
R11	29	Male	2	No	Long wait times
R12	23	Female	5	Yes	Fantastic experience
R13	19	Male	4	Yes	Very helpful staff
R14	26	Female	3	Yes	Decent value
R15	21	Male	5	Yes	Top notch quality

2. Step-by-Step Instructions for Students

Step 1: Set Up Spreadsheet & Data Entry

Create a new spreadsheet named **Survey Results**. Enter the headers in Row 1 and populate cells **A2:F16** with the 15 response records from Section 1.

Step 2: Construct Summary Statistics Table

In a separate section to the right (cells H1:I4), set up a Summary Table:

- **Cell H1:** *Summary Metric* | **Cell I1:** *Value / Formula*
- **Cell H2 (Total Responses):** Enter =COUNTA(A2:A16).
- **Cell H3 (Average Satisfaction):** Enter =AVERAGE(D2:D16). Format cell I3 as a Number rounded to 1 decimal place.
- **Cell H4 (% Who Would Recommend):** Enter =COUNTIF(E2:E16, "Yes") / I2. Format cell I4 as Percentage (%) rounded to 1 decimal place.

Step 3: Construct Score Frequency Breakdown Table

In cells H6:I12, build a frequency table for satisfaction scores:

- **Headers (H6:I6):** *Satisfaction Score (1–5) and Count.*
- **Scores (H7:H11):** Enter numbers 1, 2, 3, 4, and 5.
- **Formula (I7):** Enter =COUNTIF(\$D\$2:\$D\$16, H7).

Pro Tip: Using absolute references (\$D\$2:\$D\$16) anchors the survey data range so you can drag the fill handle down to cell I11 without the range shifting!

- **Total Count Check (I12):** Enter =SUM(I7:I11) to verify the total equals 15.

Step 4: Format for Readability

- Highlight range A1:F16 and apply alternating row colors via **Format > Alternating Colors** (or Excel Table Style).
- Center-align the numeric values in Columns B, D, and I for clean presentation.

Step 5: Insert a Distribution Pie Chart

- Highlight the Score Frequency range H6:I11 (Headers, Scores 1–5, and Counts).
- Click **Insert > Chart** and select **Pie Chart**.
- Set the Chart Title to **Satisfaction Score Distribution**.
- Under Chart Customization, enable **Slice Labels / Data Labels** to show percentages or values on each slice.

3. Submission Checklist & Grading Rubric

Submission Checklist:

- All 15 survey records entered accurately into cells A1:F16.
- Summary table in H1:I4 uses =COUNTA(), =AVERAGE(), and =COUNTIF()/I2.
- Frequency table in H6:I11 uses =COUNTIF() with absolute references (\$D\$2:\$D\$16).
- Proper cell formatting applied: Percentage (I4), 1-decimal numbers (I3), and alternating row colors.
- Titled Pie Chart generated with clear slice labels showing score distribution.

Criteria	Description	Points
Data Entry & Table Design	Accurate 15 survey records entered; alternating colors applied to A1:F16	4 pts
Summary Metrics Table	Correct use of =COUNTA(), =AVERAGE(), and conditional % ratio formula in H1:I4	5 pts
Score Frequency Table	Correct =COUNTIF() formulas with absolute referencing (\$D\$2:\$D\$16) and =SUM() verification	5 pts
Pie Chart Visualization	Pie chart inserted with descriptive title and visible slice data labels	4 pts
Formatting & Precision	Percentage formatting, 1-decimal rounding, and professional visual alignment	2 pts
Total Possible	Complete and fully functional survey analysis spreadsheet	20 pts