# Twenty Excel Data Analysis Exercises

Questions only. Work in a copy of the starter or completed workbook; do not overwrite the Raw_Sessions sheet. Every observation is synthetic.

## 1. Cell references

In a scratch area put 12 in A2 and 8 in B2. Compute their total using relative references.

Try to state the expected unit and which rows should be included.

## 2. SUM

Find total recorded minutes in tblSessions.

Try to state the expected unit and which rows should be included.

## 3. AVERAGE

Find mean minutes for recorded nonblank durations.

Try to state the expected unit and which rows should be included.

## 4. COUNT

Count valid numeric duration cells.

Try to state the expected unit and which rows should be included.

## 5. MIN / MAX

Calculate the shortest and longest valid session lengths.

Try to state the expected unit and which rows should be included.

## 6. IF

Categorize 30 measured minutes as Long if >=30, else Short.

Try to state the expected unit and which rows should be included.

## 7. COUNTIF

Count completed valid sessions.

Try to state the expected unit and which rows should be included.

## 8. COUNTIFS

Count Biology sessions marked completed.

Try to state the expected unit and which rows should be included.

## 9. SUMIFS

Sum Mathematics completed minutes.

Try to state the expected unit and which rows should be included.

## 10. AVERAGEIFS

Average Biology completed session minutes.

Try to state the expected unit and which rows should be included.

## 11. TRIM

Normalize the raw text ' NORTH ' after copying to a scratch cell.

Try to state the expected unit and which rows should be included.

## 12. CLEAN / SUBSTITUTE

Remove a nonbreaking space from a constructed value.

Try to state the expected unit and which rows should be included.

## 13. IFERROR

Provide a visible Not found result for a missing resource ID.

Try to state the expected unit and which rows should be included.

## 14. XLOOKUP / INDEX MATCH

Return the subject of resource R007 using an exact-match lookup.

Try to state the expected unit and which rows should be included.

## 15. TEXT / MONTH

Generate the calendar month key for 15 March 2026.

Try to state the expected unit and which rows should be included.

## 16. FILTER

On modern Excel show only sessions marked Completed=Yes.

Try to state the expected unit and which rows should be included.

## 17. PivotTable

Summarize count of SessionID by subject.

Try to state the expected unit and which rows should be included.

## 18. Conditional Formatting

Highlight negative durations in raw data before cleaning.

Try to state the expected unit and which rows should be included.

## 19. Chart selection

Choose a line chart for Jan–Jun 2026 counts.

Try to state the expected unit and which rows should be included.

## 20. Final capstone

Write three findings, the number excluded, and one limitation.

Try to state the expected unit and which rows should be included.