

# How to break down a SQL Problem

1. Look at the question and identify all the tables that are involved in the question.
  - a. Jot these down in your notes first
  - b. Prep the FROM/JOIN clauses after
2. Identify the columns (fields) that you need to either a) display or b) use to create a display
  - a. Start building the SELECT clause
  - b. Start building a subquery FROM/SELECT clauses
3. Build the first draft of the query
  - a. SAVE!
4. Do you need to limit the results? Prep the WHERE clause!
  - a. Equality: field\_name = that
  - b. Relational: field\_two < that, field > that
  - c. Ranged: other\_field BETWEEN a AND b
  - d. Specified: field IN (B, I, P, O, C, L, G, B, T, Q, I, A)
5. Look for the aggregate function terms (sum/min/max/count) and Identify what will be coalesced with the GROUP BY clause
  - a. Remember the AS for the proper naming conventions
6. Identify the paths used to connect the tables
  - a. Primary to Foreign key
  - b. Multiple PK parts (Composite PK) means compound ON clause ( AND each paths)
  - c. These go to the ON clause(s)
7. Update the query
  - a. SAVE!
8. Check the results
  - a. Does it match the expected results?
  - b. What is different?
  - c. Ask questions to yourself
9. Add details and update query
  - a. Do you need an ORDER BY clause?
  - b. Adjust column order
10. Repeat as needed!