

ONE STEP AT A TIME ANALYSIS

1. Start with **ONLY ONE table!**

This should be your base or home table which you use to identify the basic group of students/classes in your query. For finding all the students who graduated in Fall 2000, the base table would be the Student Degree table.

2. Put everything that you limit on the **Request Line.**

The only way to see that limits are working is to LOOK at the data – be suspicious!

3. Follow, follow, follow the **N!** (Watch Brio's bottom, right corner.)

While you still have one table, make a note of the total number of records you get. Check it for common sense (i.e. You don't get 50,000 records which is the total number of students at ASU, when you are looking for just those students who are taking ENG 101.)

4. Add **ONE table at a time.**

Add one table at a time, with an equal join (the default).

5. Join tables **left to right.**

Keep your home table on the left side of your screen and always drag from left to right when joining tables.

6. Follow the **N some more!**

When you add a table, make sure you know what happened to your total N.

N Stays the Same - that means there is one record in each table that matches each other. Yeah - that's the easy one.

N Increases - the table you added has more than one record that matches each record in your original table. For instance if you join Student Currently Enrolled to Student Address you may get three address types for each student - a local address, a permanent address and a business address. Your original N will grow to double or triple the size depending on how many students have business addresses.

N Decreases - the table you added does not have a match for each student in the first table. For instance, if you are looking for Currently Enrolled Students who already have one Degree from ASU, the Degree table will only have a record for the small number of people who already graduated from ASU once.

7. Fix the Increase or Decrease in N if you have to.

Sometimes it makes sense that the N increases or decreases. For instance, if you get 25 Molecular Biology majors from the Student Currently Enrolled table and then you join to the Student Class table to get all the classes they are taking, the N will increase because each student is taking multiple classes. But if you are trying to get back to one record per student, try the following:

For N Increases: Preferably, look for a data element in the new table that you can limit and get just one record per student. For instance in the Student Address table you can limit Address Type to A to get just local address. If the new table has a semester, you can limit it to get a particular semester.

OR if the multiple records are the same data per student all the way across the results column, you can double click on the Request button and check the Return Unique Rows box. **THIS IS CHEATING THOUGH IF YOU DON'T KNOW WHY YOU ARE GETTING DUPLICATE RECORDS.** Using the Return Unique Rows box also slows down the query a lot.

For N Decreases: You can change your join from an equal join to a left join by double clicking on the join line. That will give you all the records in the left table and where there is no match in the right table the fields will be null (appears as a blank).

8. Make all joins to the home table if you can.

Don't join thru tables if you don't have to:



9. Add another table and Follow the N some more.

Keep adding tables, one at a time, until you have everything you want. Make sure each time you add a table you know what happened to the total number of records.

10. Count, Sum, and Average Last.

Never use count, sum or average before you have looked at the individual records. Even if the counts are huge, make sure you eyeball a portion of the data before you start summarizing.

11. Have a strategy for checking the data.

Look for a student you know that should be included in the data. Match to a published number. Look up individuals on SIS screens to see that what you get is correct.