

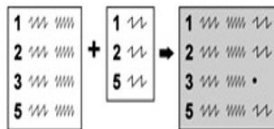
## Types of match merge

one-to-one merge, one-to-many merge and many-to-many merge



### One-on-one match merge

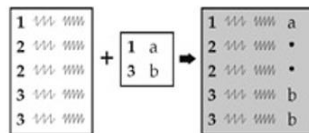
There was only one observation for each value of the BY variable in both data sets. This is called a *one-to-one merge*.



Numbers are the values of by variable to merge data sets, there is only one obs associated with each number in both input data sets.

### One-to-many match merge

You may have a situation where one data set has only one observation for each value of the BY variable, but the other has more than one observation for each value of the BY variable. This is referred to as a one-to-many merge.



there is two obs associated with one number 2 in the first data sets,  
The second data set has one obs associated with each number.

**Many-to-many merge**

When both data sets have more than one observation for each value of the BY variable, this is a *many-to-many merge*.

A many-to-many merge has ***potential problem***.

- have exactly the same number of observations for each BY value in the two data sets
- have more than one observation with a given BY value in each of the two data sets and the number of observations differs in the two data sets



A many-to-many merge has ***potential problem***.

- If you have exactly the same number of observations for each BY value in the two data sets, a many-to-many merge works as expected.
- If you have more than one observation with a given BY value in each of the two data sets and the number of observations differs in the two data sets, you should not attempt to use a MERGE statement to combine the data sets.