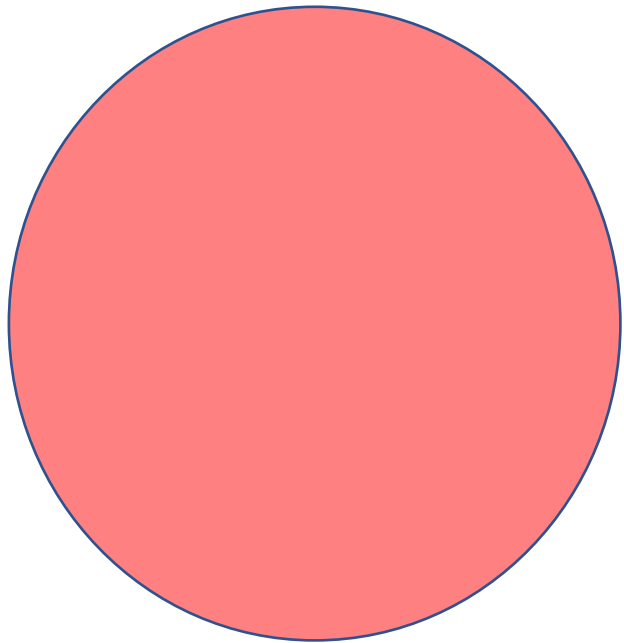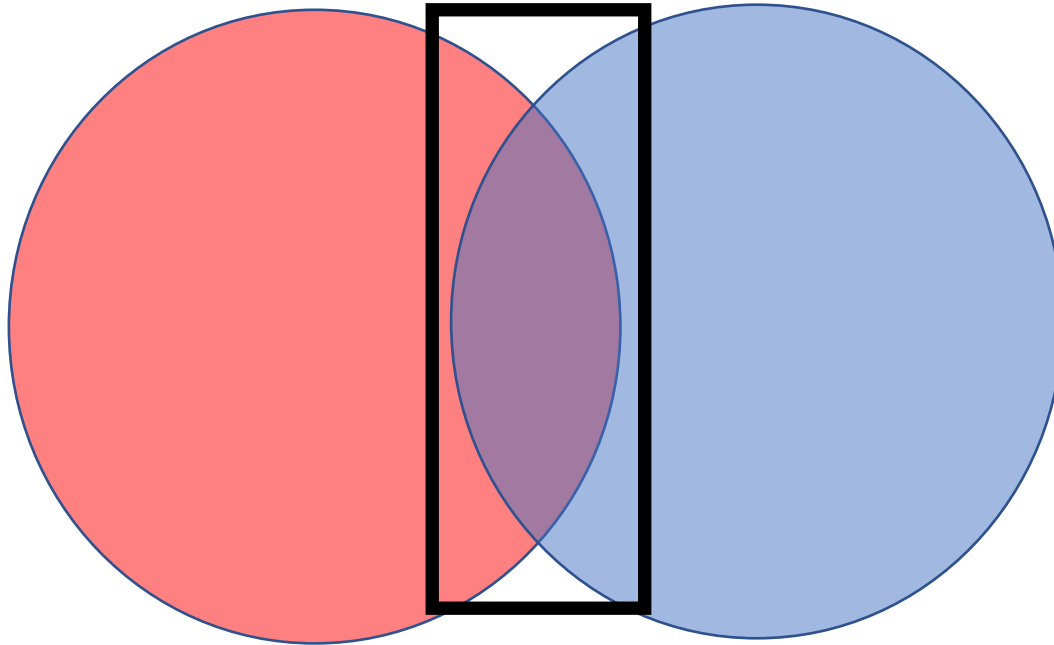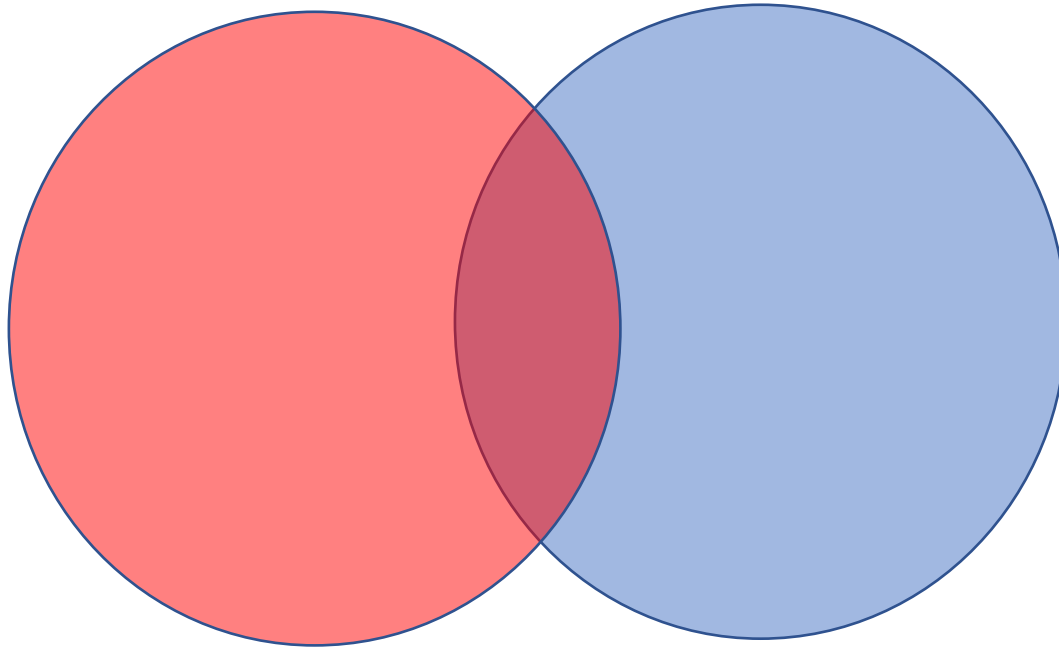# Joining…..

Inner join

Just what's in both
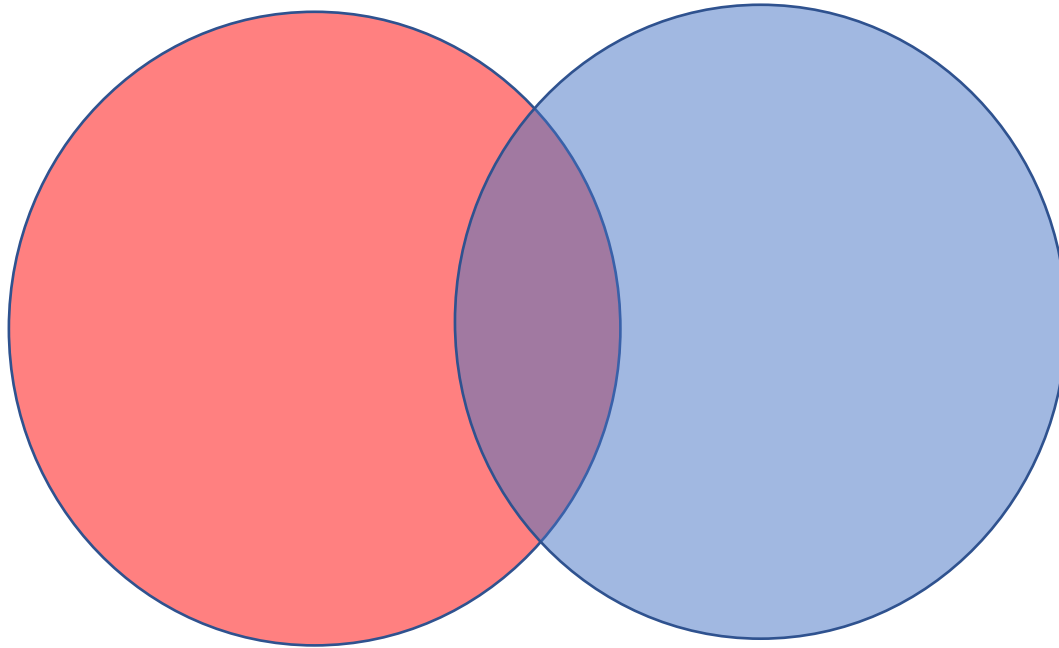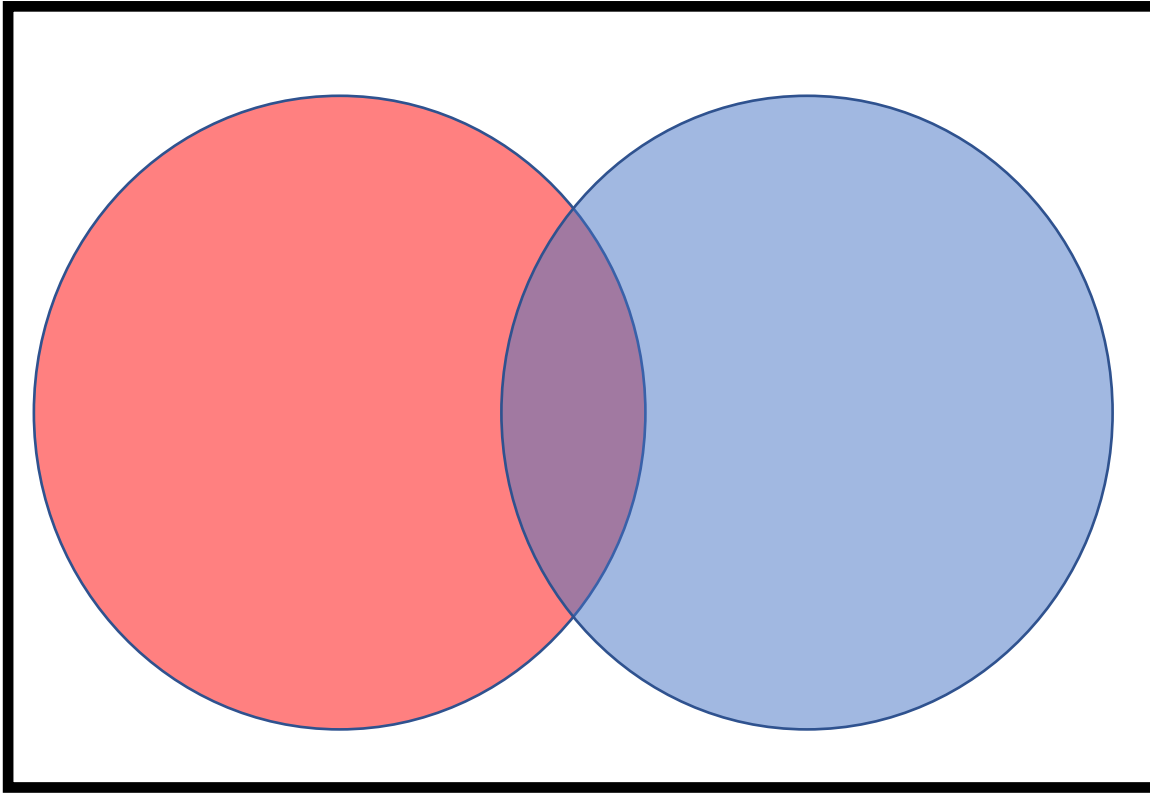
Left join

All from left circle, plus any common elements from right – ie no blue bits
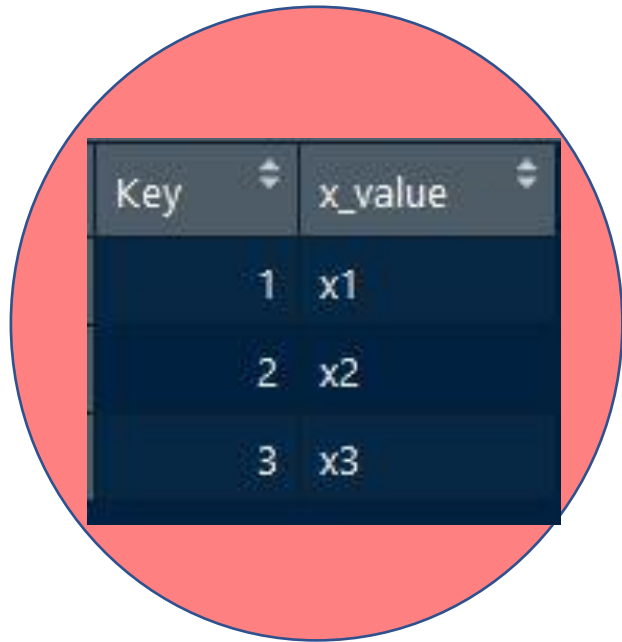
Right join

All from right, plus any common elements from left – so no red bits

Full join
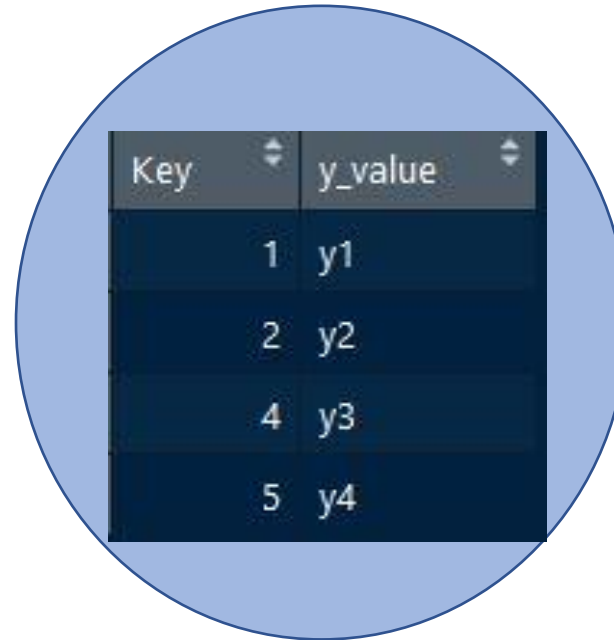
Everything, whether shared or not

Once more with data…..

Key	x_value
1	x1
2	x2
3	x3

Key	y_value
1	y1
2	y2
4	y3
5	y4

Inner join

Key	x_value
1	x1
2	x2
3	x3

Key	y_value
1	y1
2	y2
4	y3
5	y4
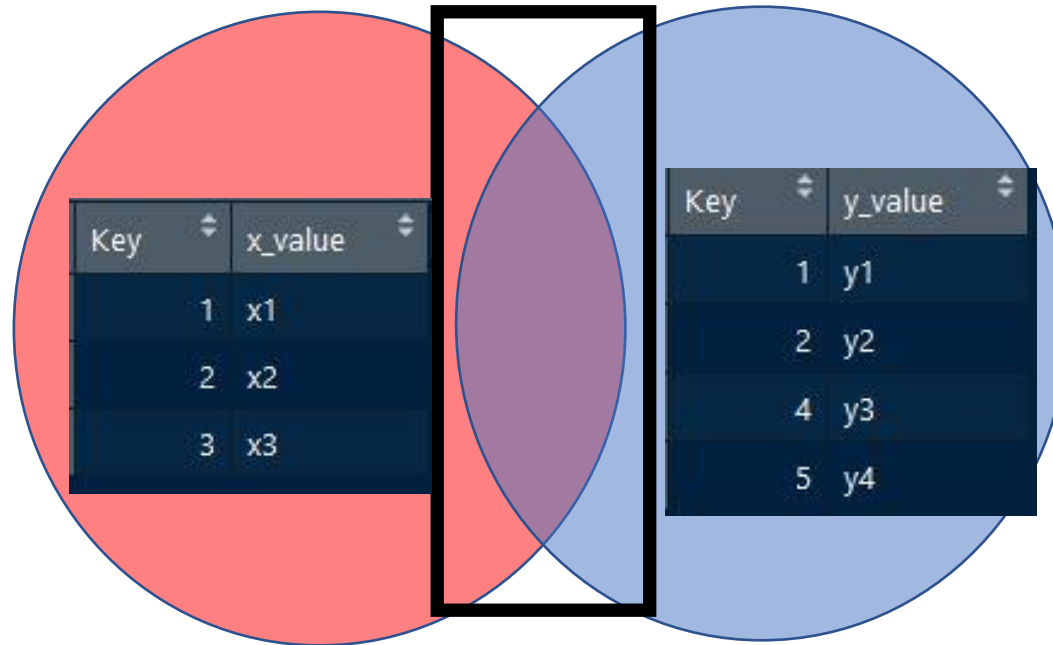
Just what's in both

Key	x_value	y_value
1	x1	y1
2	x2	y2

Left join

All from left circle, plus any common elements from right – ie no blue bits

Right join

Key	x_value
1	x1
2	x2
3	x3

Key	y_value
1	y1
2	y2
4	y3
5	y4
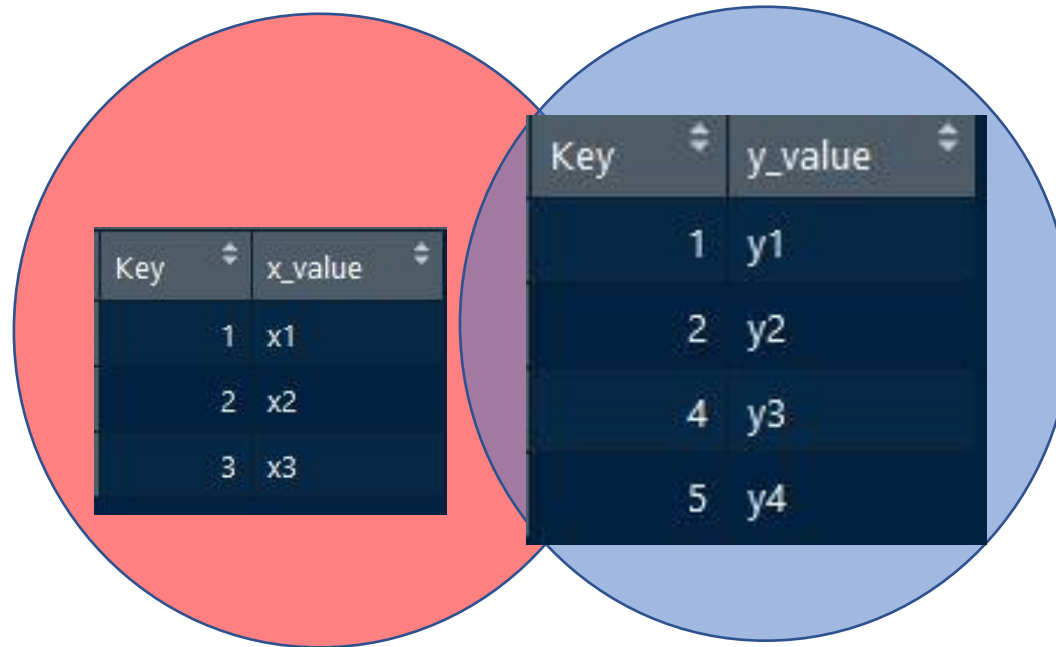
All from right, plus comm[on] from left – so no red bits

Key	x_value	y_value
1	x1	y1
2	x2	y2
4	NA	y3
5	NA	y4

Full join
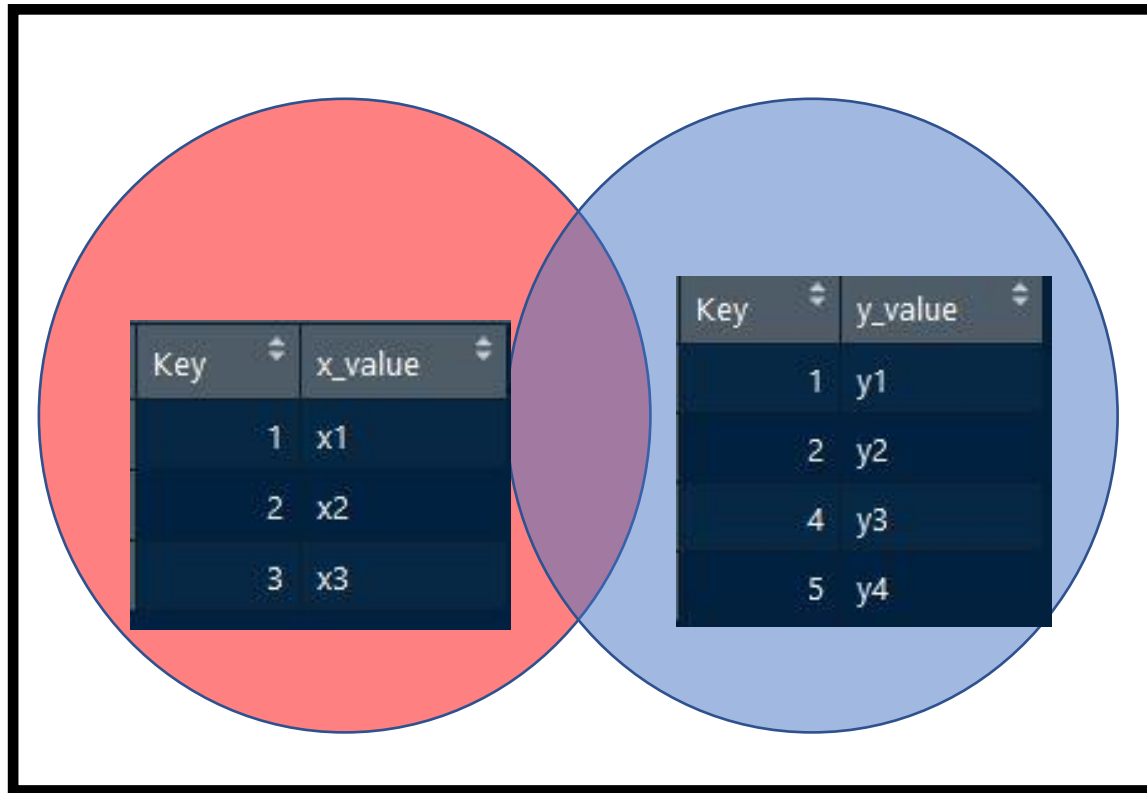
Everything, whether shared or not

Anti join….
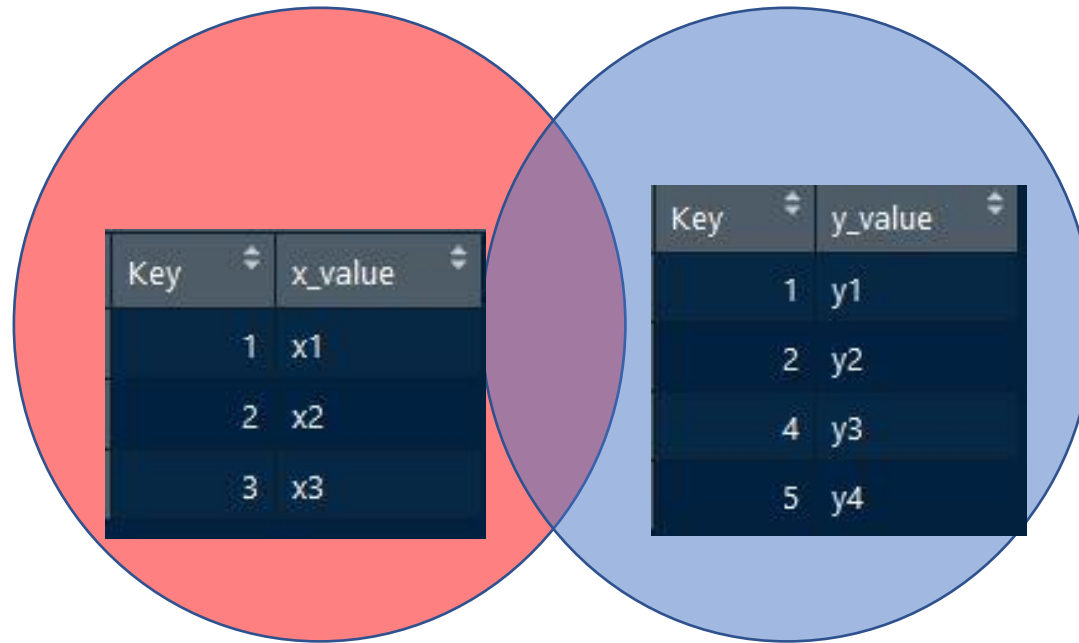
Only what's in red but NOT in blue -

a

x1	x2
A	1
B	2
C	3

+

b

x1	x3
A	T
B	F
D	T

=

Mutating Joins

x1	x2	x3
A	1	T
B	2	F
C	3	NA

dplyr::**left_join(a, b, by = "x1")**

Join matching rows from b to a.

x1	x3	x2
A	T	1
B	F	2
D	T	NA

dplyr::**right_join(a, b, by = "x1")**

Join matching rows from a to b.

x1	x2	x3
A	1	T
B	2	F

dplyr::**inner_join(a, b, by = "x1")**

Join data. Retain only rows in both sets.

x1	x2	x3
A	1	T
B	2	F
C	3	NA
D	NA	T

dplyr::**full_join(a, b, by = "x1")**

Join data. Retain all values, all rows.

Filtering Joins

x1	x2
A	1
B	2

dplyr::**semi_join(a, b, by = "x1")**

All rows in a that have a match in b.

x1	x2
C	3

dplyr::**anti_join(a, b, by = "x1")**

All rows in a that do not have a match in b.

source:https://data-lessons.github.io/gapminder-R/12-joins.html