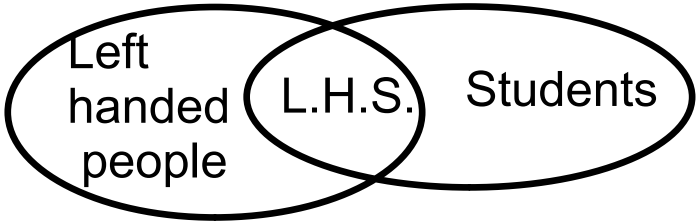
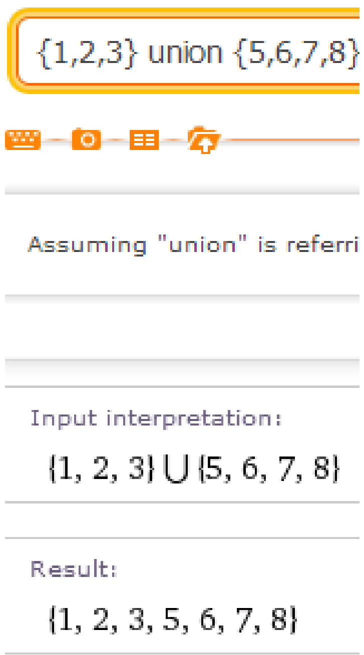
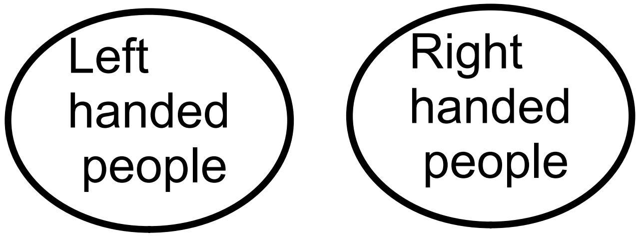


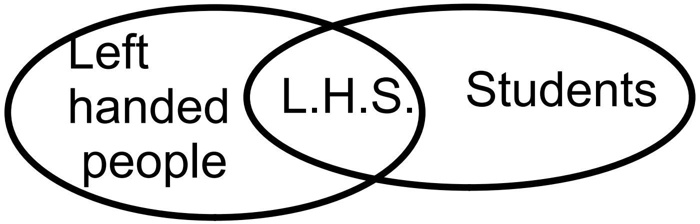
The set of people who are left handed OR students =
{Left handed people} U {Students}
= Everybody in the graph
= Union of lefties and students

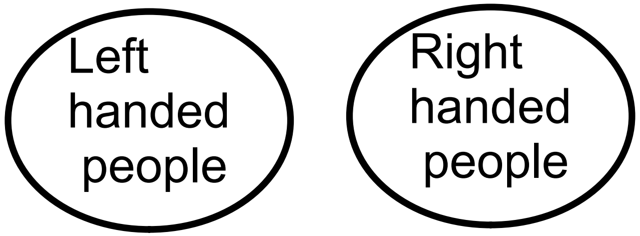




The set of people who are left handed or right handed,
{Left handed} U {Right handed}
= Everybody in the graph
= Union of lefties and righties

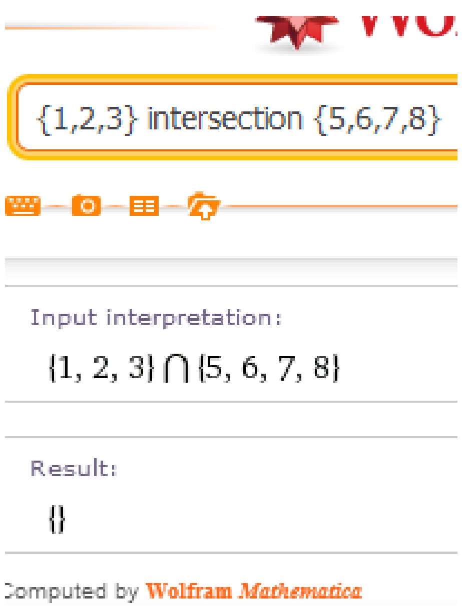
(1,7) U (8,9)
tells us the anything that is
1-7 or 8-9 is in the domain.
"OR" joins the segments of the real
number line.





The set of people who ARE left handed AND students =
{Left handed people} $\cap$ {Students}
= Left handed students
= Intersection of lefties and students

The set of people who are left handed and right handed,
{Left handed} $\cap$ {Right handed}
= Nobody in the graph
= Intersection of lefties and righties



(1,7) $\cap$ (8,9)
tells us the anything that is
in both 1-7 and 8-9 is in the domain.
Well, that would be no one number.
"AND" looks for overlaps.

WE DON'T NEED THIS NOTATION TO STATE OVERLAPS.

If a problem makes you think the domain is (1,9) $\cap$ (5,20),
then you just write (5,9)