All the leaves are brown
No brown things are blue
Some leaves are not blue

Some wines are sour
Not all sour things are sweet
Some wines are not sweet

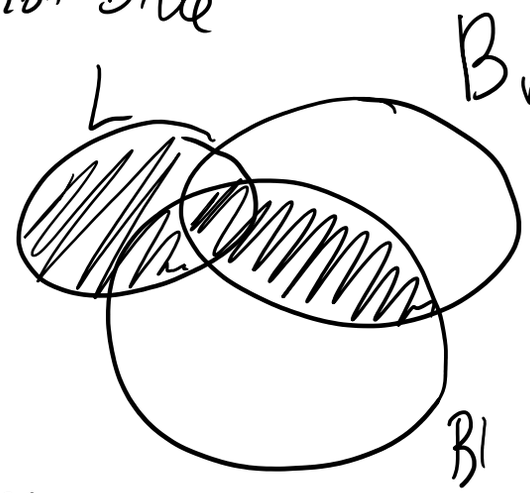
Not all demons are easy
Some demons are blue
Some demons are easy

Some bananas are rotten
Some rotten things are not edible
Some bananas are not edible

All the leaves are brown
No brown things are blue
Some leaves are not blue

X

Brown things are not blue



invalid: there could be no leaves at all.

Some wines are sour

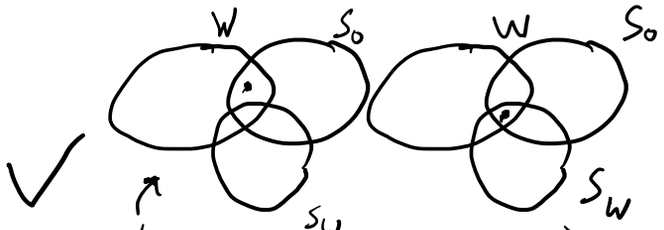
Not all sour things are sweet ⟷ Some sour things are not sweet

Some wines are not sweet

not all A are B

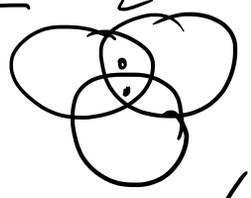
$\neg \forall x [P(x)]$

$\exists x [\neg P(x)]$

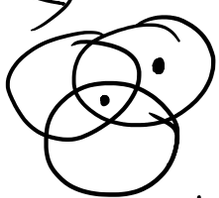


✓

already satisfies 2nd sentence!



✓

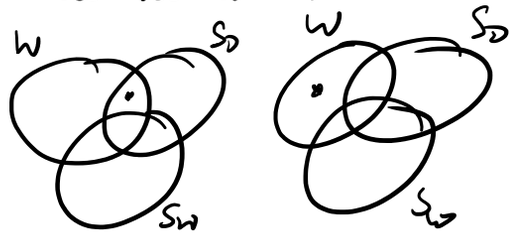


X

Counterexample!

Take a sweet sour wine + something not ✓ sweet, sour not-wine.

Conclusion: some wines are not sweet



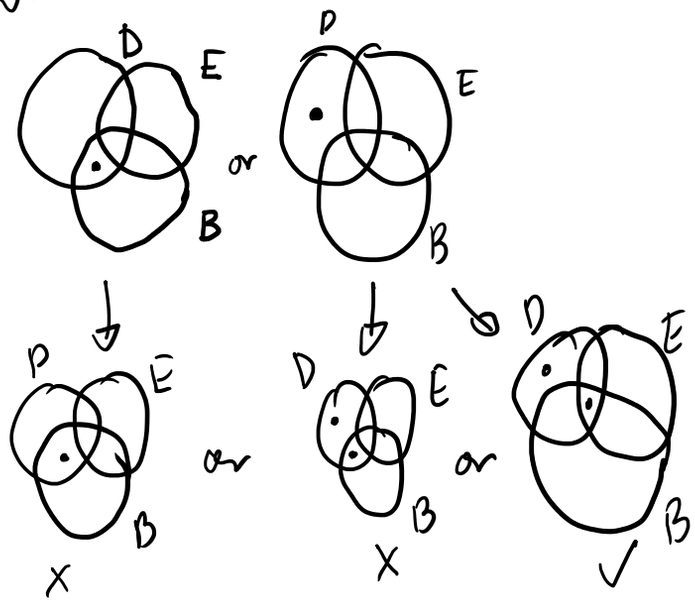
(so conclusion is invalid)

Not all demons are easy $\longleftrightarrow$ Some exists demons which are not easy

Some demons are blue

Some demons are easy

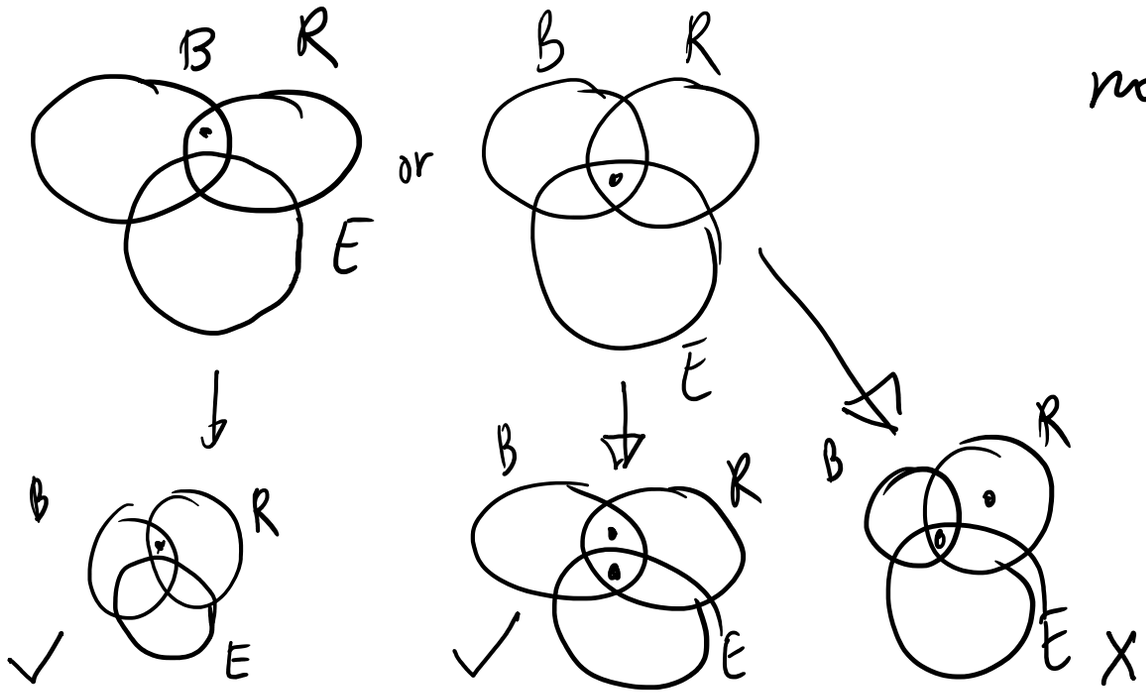
Invalid conclusion!



Some bananas are rotten

Some rotten things are not edible

Some bananas are not edible



not valid