Exercises in class

All the lives are brown

No brown things are blue $\Leftrightarrow$ Brown things are NOT blue

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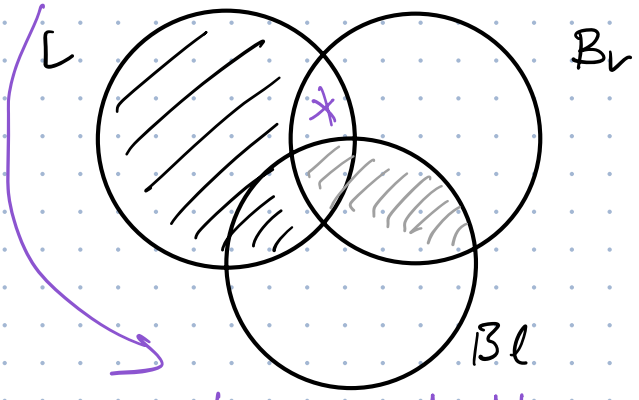
Some lives are not blue



there should be a dot at *, but there isn't

$\Rightarrow$ invalid conclusion

implies that there are undead leaves

Some wines are sour (2 cases) — 2 cases

Not all sour things are sweet $\Leftrightarrow$ Some sour things are not sweet

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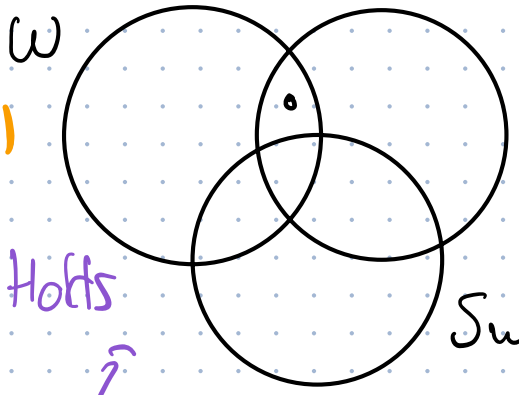
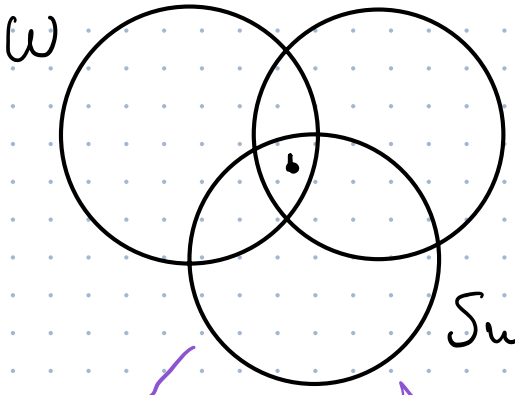
Some wines are not sweet

(1)



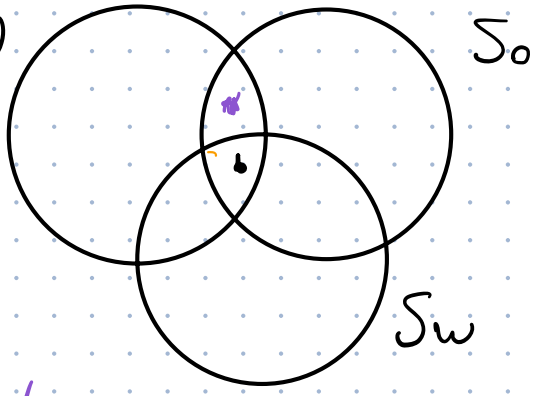
✓ Holds

or



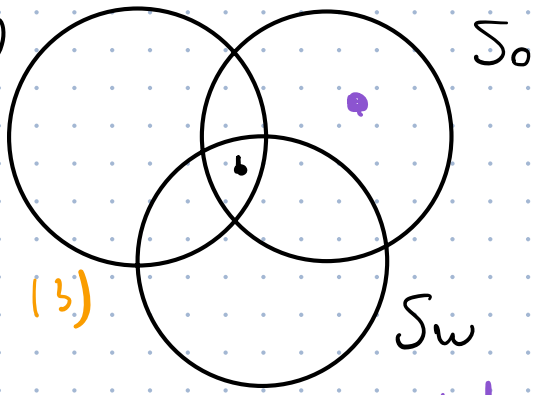
satisfies second sentence

(2)



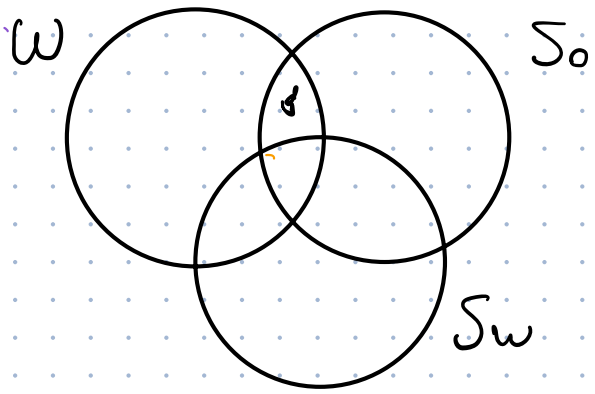
✓ Holds

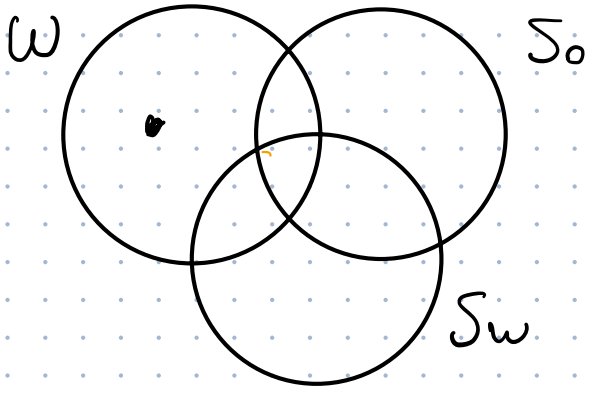
(3)



X Does not hold *

↳ Conclusion



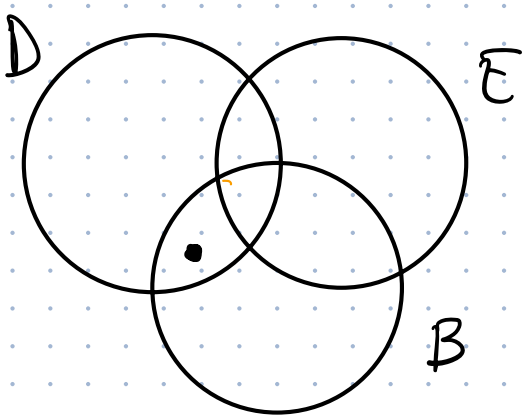


Invalid concls.

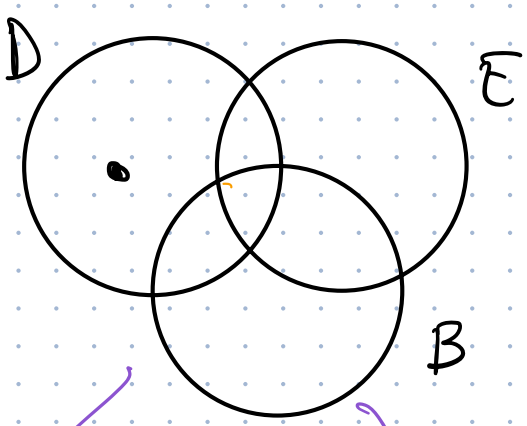
* Counterexample
Take a sweet sour wine + something NOT sweet

Not all demons are easy ⟷ ∃ demon which is not easy
(1) Some demons are blue

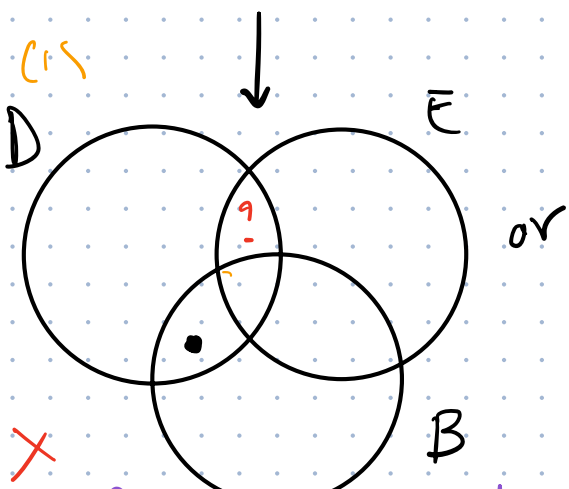
Some demons are easy



or

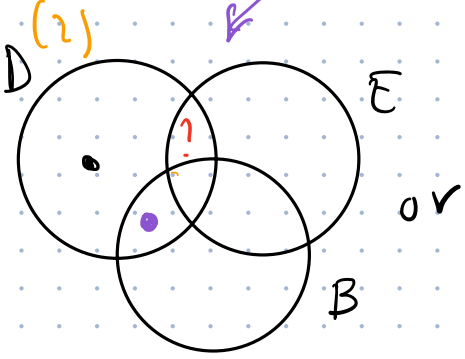


(1)



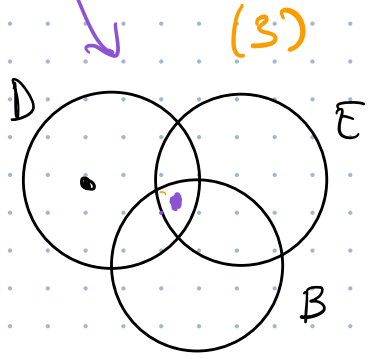
or

(2)



or

(3)



✗ Satisfies 2nd sentence

✗

✓

Invalid conclusion

(1) Some bananas are rotten

(4) Some rotten things are not edible

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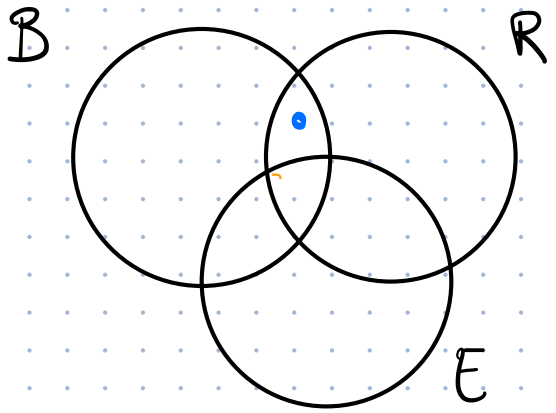
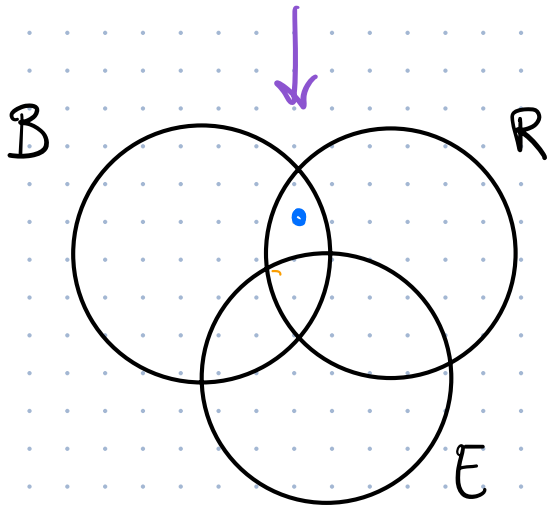
(3) Some bananas are not edible

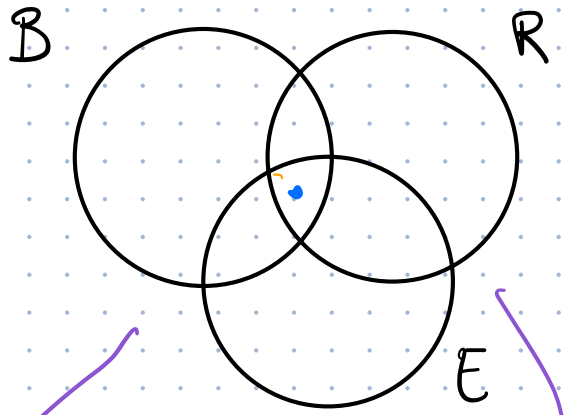


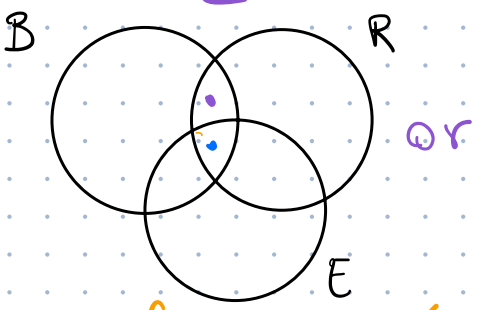


satisfies (2)

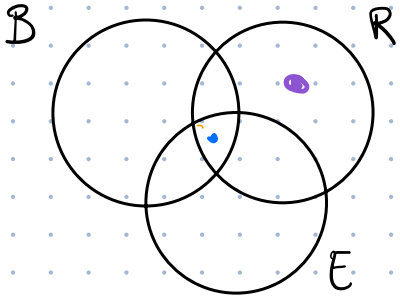
satisfies (3) ✓

or





or



Satisfies (3) ✓

✗

→ Invalid conclusion