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Homework 3
23 April 2023
         15:30
a) v(p) \neq v(q)
 φ: (p vq) Λ (¬p v ¬q)
b) at least one of \{v(p), v(q)\} is T
 Ø: p v9
c) at must one of {v(p), v(q)} is T
 1: 7pv 79
d) exactly one of {v(p), v(q)} is T
 1: (pvq) 1 (np vnq)
e) d: pugur
1) ø: ¬pv ¬gv ¬r
g) d: (¬p v¬g) Λ (¬p v¬r) Λ (¬g v rr)
h) ø: (pvgvr) 1 (¬pv¬q) 1 (¬pv¬r) 1 (¬gv¬r)
i) $: (p v q) \ (q v r) \ (p v r)
j) d: -p v - q v - r
L) d: (pvg) A (gvr) A (pvr) A ( ¬pv¬gv¬r)
2.
 a) $\phi: (b_A \v w_A) \land (\gamma b_A \v \gamma_W_A)
     4: (b, v w, ) 1 ( - b, v - w,)
        (by A pa) V (mx A ma) V d V A
3)
 a) + Each city has one color
    + Suzu and Noto have diggerent color
    + Suzu and Wajima
    + Noto and Wajina
    + Anomizu and
               Noto
                             11
    + Anamizy and Wajima
                             r
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