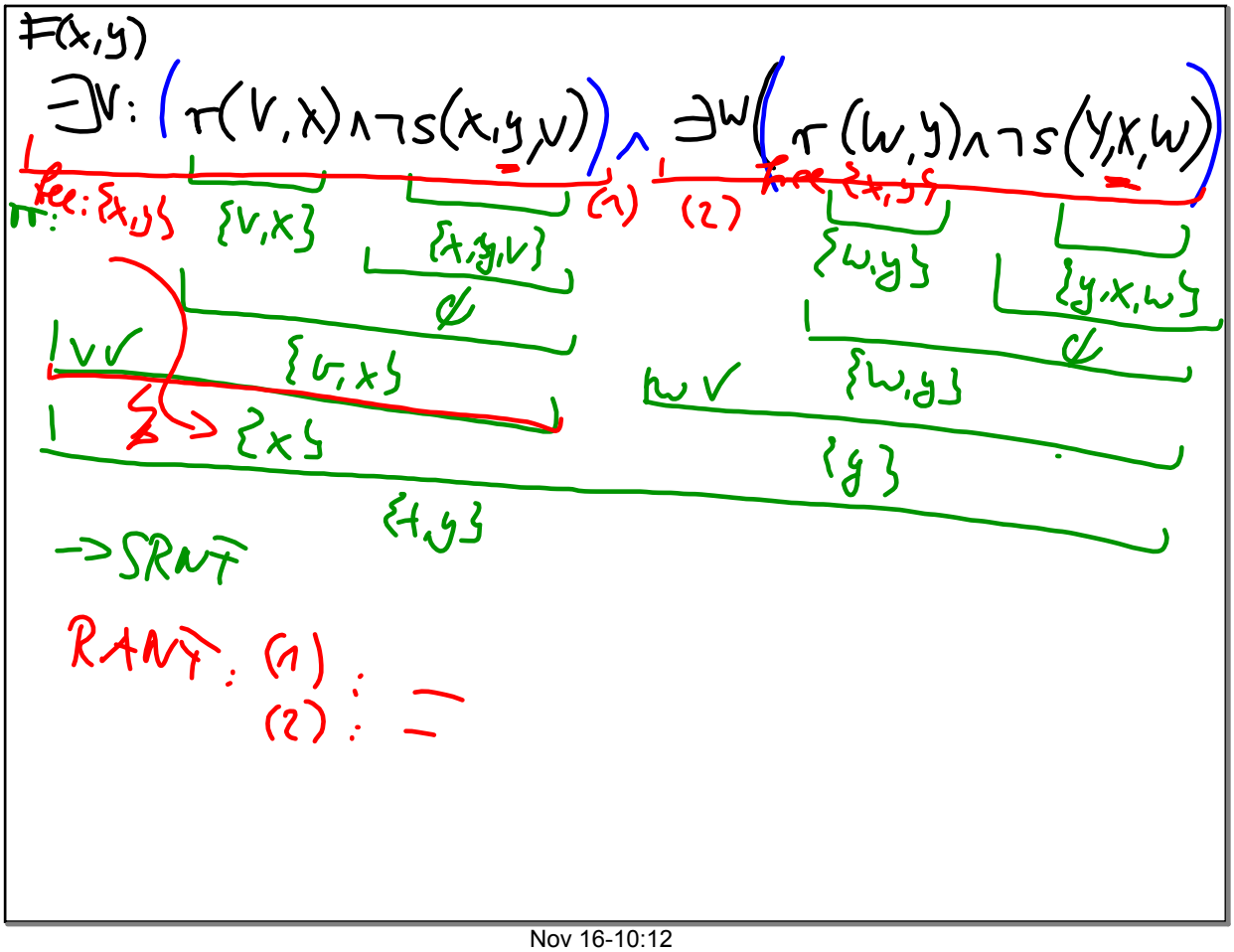
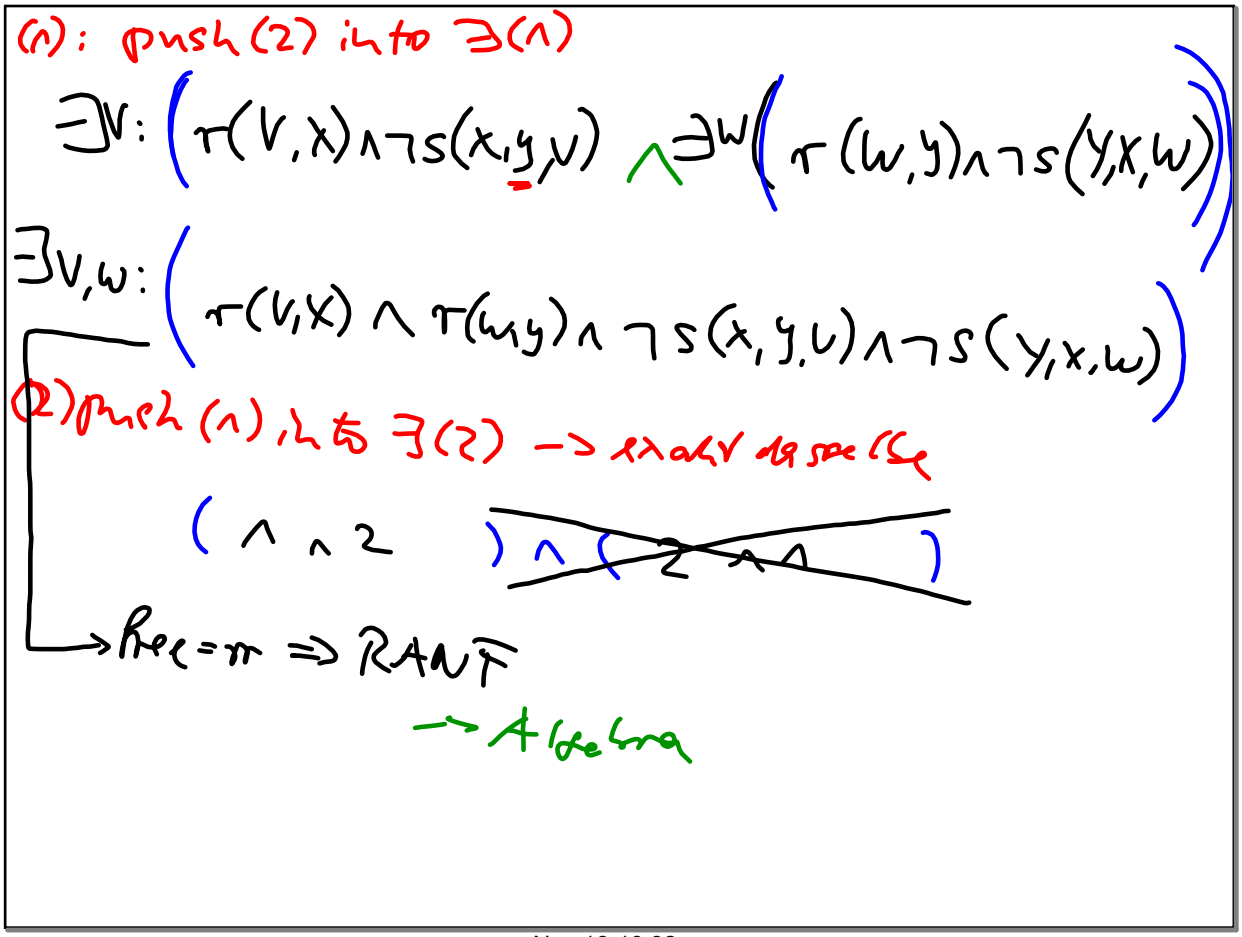
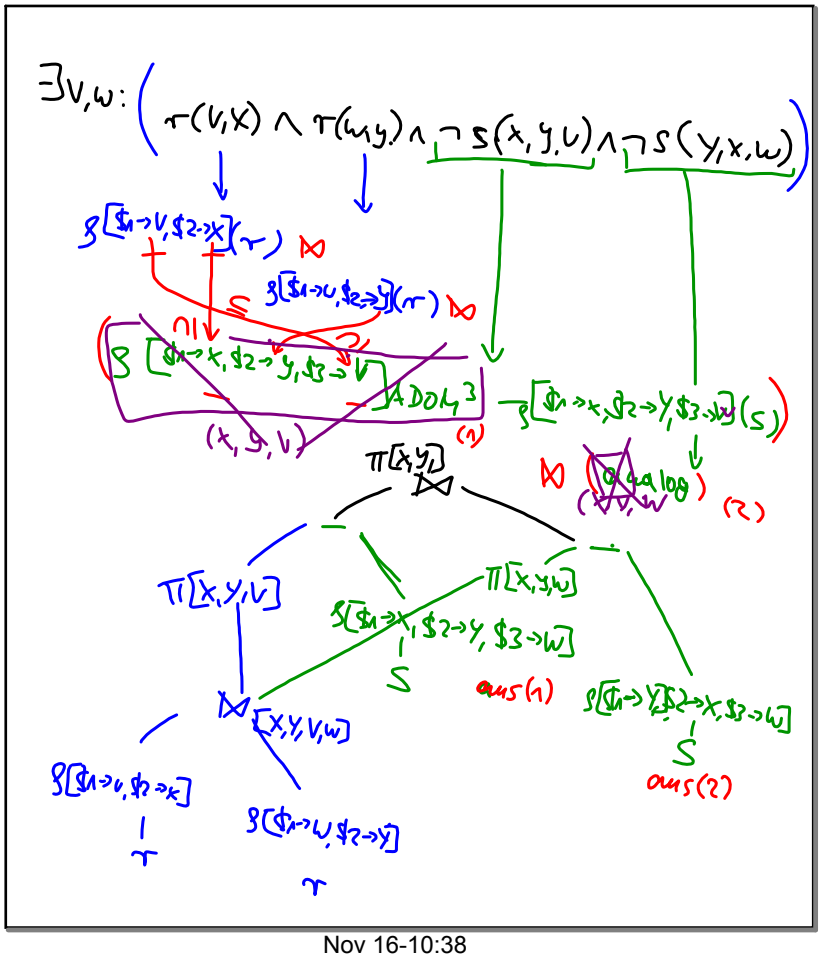


Nov 16-10:12



Nov 16-10:32



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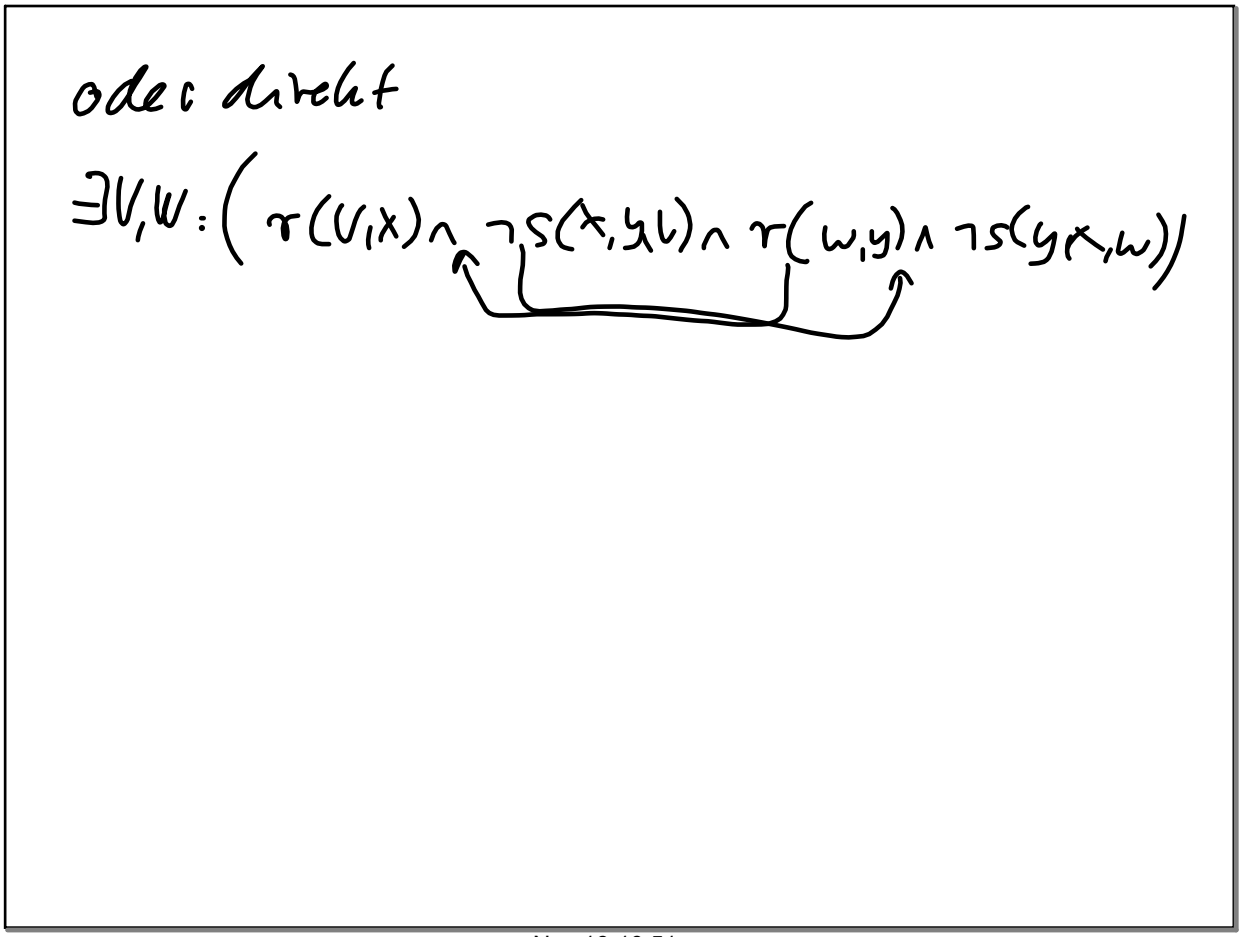

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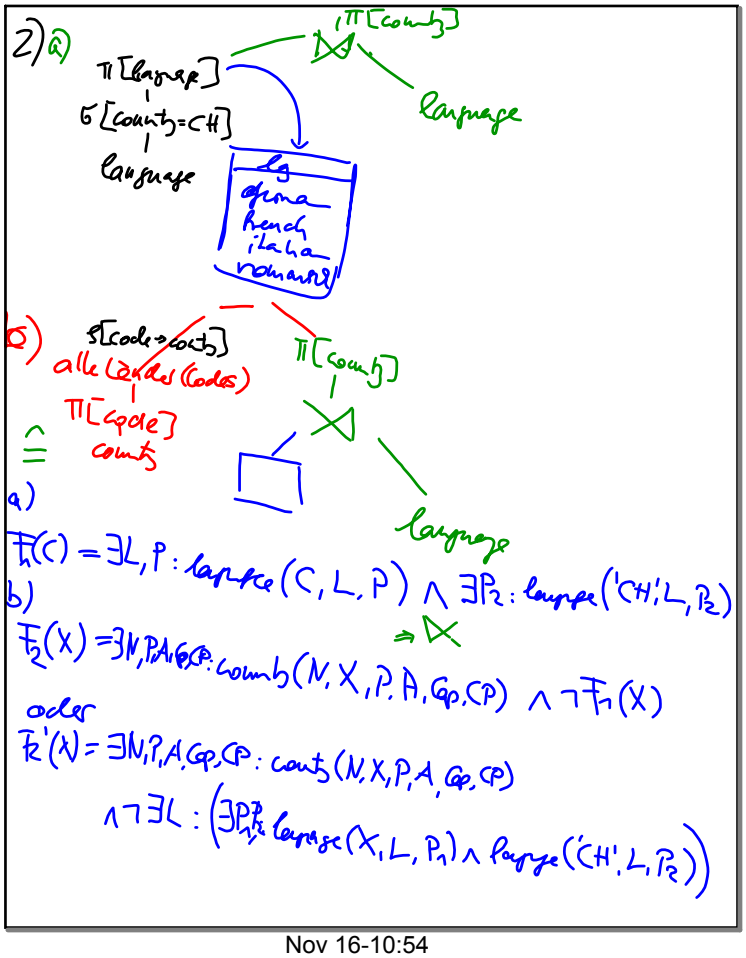
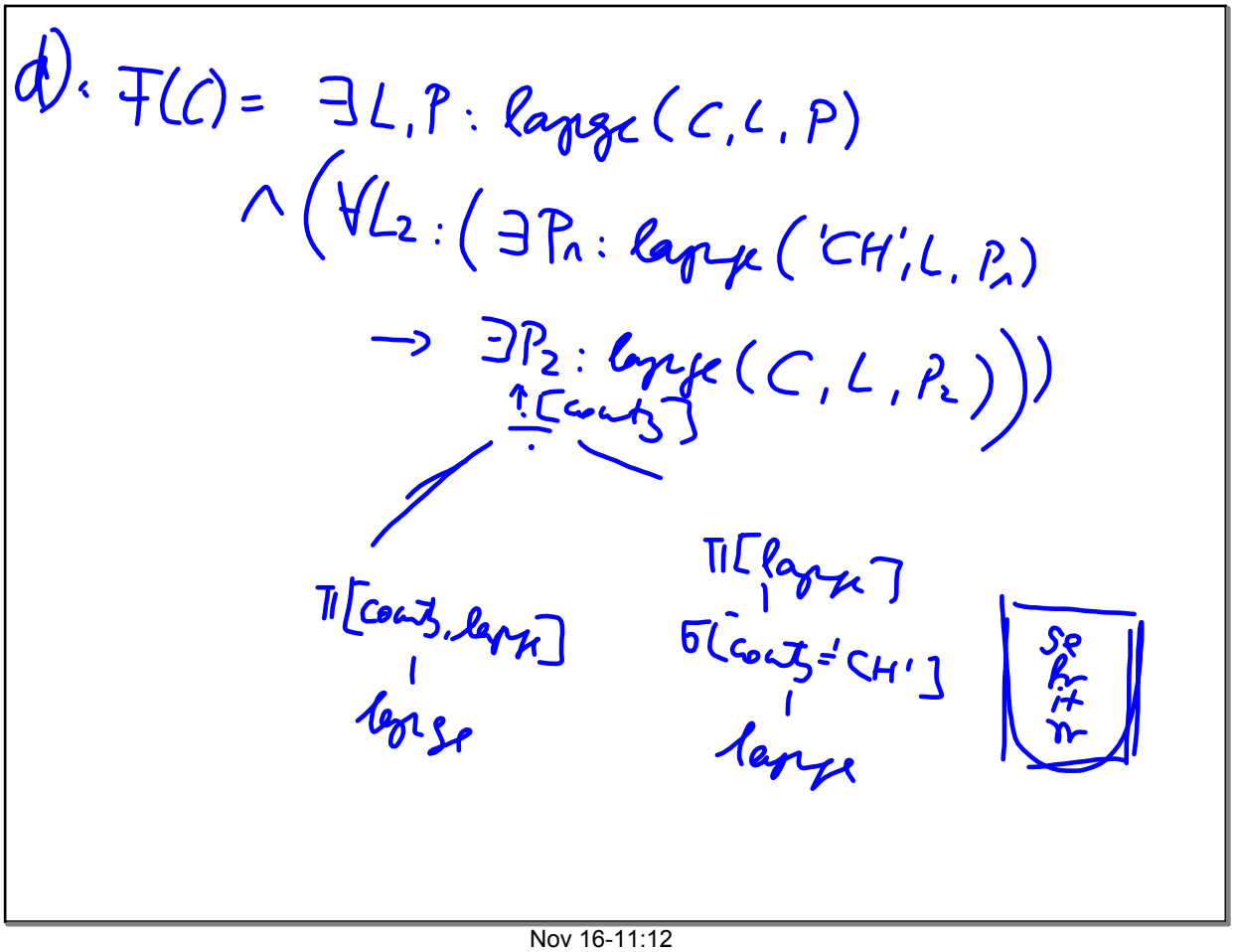


Nov 16-10:54

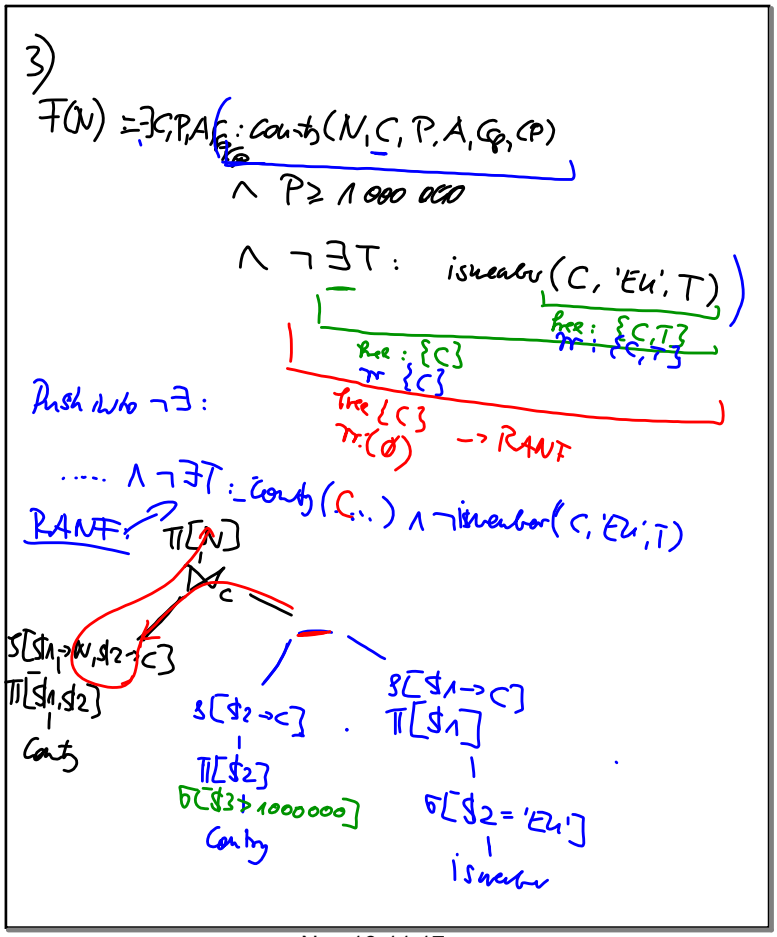
c) $F(C) = \exists N, A, P, Gp, CP : country(N, C, A, P, Gp, CP) \wedge \forall L : ((\exists P_1 : language(C, L, P_1)) \rightarrow \exists P_2 : language('CH', L, P_2))$

```
select code
from country
where not exists (select * from language l1
                  where l1.country=code
                    and not exists (select *
                                    from language l2
                                    where l2.name=l1.name
                                      and l2.country='CH'))
```

Nov 16-11:06



Nov 16-11:12



Nov 16-11:17

4) $r \div s = \{ \mu \in Tup(A) : \{\mu\} \times s \subseteq r \}$

inhaltlich:

$F(A) = ADOM(A) \land \forall X : s(X) \rightarrow r(A,X)$ ⇒ $A \in \pi[\$1](R)$

$= \exists Y : r(A,Y) \land \forall X : s(X) \rightarrow r(A,X)$

$= \exists Y : r(A,Y) \land \neg \exists X : s(X) \land \neg r(A,X)$

free: {X, A}

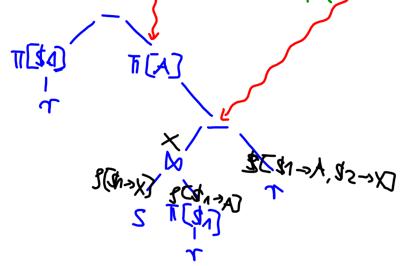
→ prob A

$= \exists Y : r(A,Y) \land \neg \exists X : s(X) \land \exists Y : r(A,Y) \land \neg r(A,X)$

free A

free: {A}

free: X, A



Nov 16-11:32